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Promoting Student Success:
Students' Perceptions of the Factors that Influence their Engagement
at a Mexican University

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**Promoting Student Success:
Students' Perceptions of the Factors that Influence their Engagement
at a Mexican University**

**by
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Dissertation

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*Para Alejandra,
con todo mi amor.*

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Promoting Student Success:
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Student success is a major concern of the higher education community. To increase it, students, parents, teachers, and educational leaders have concentrated on improving the performance of the factors which affect student engagement and promote better learning and persistence—and, *ergo*, greater student success.

To explore this phenomenon, this study has used a combination of qualitative and quantitative methodologies, especially Interactive Qualitative Analysis (IQA). From the contributions of highly engaged students in focus groups, personal interviews, and surveys it was possible to: identify the factors which influence the level of student engagement, show their relative level of influence, measure their performance (in the particular case of the participants and the site of the study), demonstrate how they are interrelated, and learn student perceptions of them.

The results indicate that among the nine factors that affect student engagement, the two which contribute most to the level of student success are related to them personally: personal aspects and goals (values, interests, personal and study habits, behaviors in and out of class, desire for improvement, clear and ambitious goals, commitment to goals). For successful students, both factors have high relative influence and high real performance. The diagram which shows the relation among the nine factors further revealed that the most fundamental prerequisites to student success are parents and teachers who influence them fundamentally by their instruction, companionship, encouragement, expectations, and support.

One product of the research is a grounded model of student engagement, a description of the engaged student, and a tool (the Matrix of Engagement Level) to measure the level of a student's engagement. Further, a list of recommendations for the site of the study was created to improve student performance there.

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CHAPTER ONE

INTRODUCTION TO THE STUDY

Background

A nation's welfare and quality of life are based in considerable measure on the level of education of its citizens. The more educated people are, the higher quality of life they can expect. Given this perspective, faculty and administrators in higher education must make their best effort to support students in their effort to graduate and succeed (Tinto, 1993; Yorke and Longden, 2004).

Data on student retention and success, however, make clear that a formidable area for improvement exists in higher education today. Since the first national study of college student retention in the United States in the 1930s, degree completion rates of a four-year college career have remained surprisingly constant. The early study indicated that approximately sixty percent of entering freshmen did not earn a baccalaureate degree in four years (McNeely, 1938). Another study later concluded that forty percent of entering freshmen never graduate from college (Iffert, 1957). More recently, Tinto (1993) reported that of the nearly 2.5 million students who in 1993 entered higher education for the first time, approximately 1.1 million—forty-four percent—will leave without ever completing either a two- or four-year degree program. Data on México reveals a very similar scenario. In the early 1990s, Todd and Gago (1990) indicated that

only forty-one percent of students in higher education earn a degree. More recently, the Reséndiz (2000) report about the future of higher education in México indicated progress; but still more than fifty percent of students in higher education never earn a degree. The dropout rate among community college students is apparently rather higher than the rate at four-year colleges (Cope and Hannah, 1975). Further, many students do not appear to be highly engaged with their studies, which affects learning negatively. A recent study on student engagement revealed that fifty-seven percent of full-time, undergraduate students in US higher education spent an average of fewer than fifteen hours a week working on their studies outside the classroom, far less that most educators would expect (Kuh *et al.*, 2001). In México, problems with the quality and quantity of faculty (especially full time), the lack of congruence between individual and social needs, and the ratio of classroom hours/independent study hours (too many in class, too few out) also affect student engagement and reveal an enormous area for improvement (Reséndiz, 2000; Todd and Gago, 1990). The data reveal why the promotion of student success is currently one of the top concerns in higher education in the U.S. as well as in México (Kuh, 2001; Moxley *et al.*, 2001; Wingspread Group on Higher Education, 1993; Reséndiz, 2000).

Student success is a complex issue. Highly correlated with student engagement, university administrators and faculty must understand how students can be engaged in their studies in order to achieve higher levels of learning and persistence (CCSSE, 2004), and ultimately, of success. The rewards to the graduating student are considerable: a more meaningful life; better results for the college; and a better citizen for society.

Problem Area:

The Sad Reality of Student Retention and Engagement

Only about forty percent of US college students graduate at the scheduled date for their entering class. Most of the remaining sixty percent never earn degrees. In México the situation is very similar, where almost sixty percent of students in higher education never earn degrees (Reséndiz, 2000; Todd and Gago, 1990; Rangel Guerra, 1983). Such a history reveals an enormous waste of time, energy, and money among the most talented population in the nation (Tinto, 1993; Bradburn, 2003). For a long time, the college dropout phenomenon has been recognized as a drain on national resources (Pervin, Reik and Dalrymple, 1966). Why do students drop out of college? How can the overall dropout rate be reduced? How can students be motivated to greater engagement? Those are questions that faculty and administrators at higher education institutions have asked for many years. Chapter Two includes an attempt to answer them.

Dropping out is a problem that affects all educational levels (Wells *et al.*, 1993), though analysis reveals that the problem is most critical at the college level. Students exercise a greater degree of freedom during college years, and mandatory education does not cover post-secondary education. From another perspective, the problem also affects all spheres of society: students, their families, the economy, and the well being of society.

Significance of the Problem:

The Impact of Low Student Retention and Engagement

Higher education is important. Schools must provide the best education possible to their students (Hiltner and Loyland, 1998). Many decision-makers, students included, legitimately want to know how to increase student chances of finishing college, whether their concern is based on the loss of talent, the waste of limited educational resources, the vocational and personal setbacks that result from students' impeded career development and futile expenditure of time and effort (Astin, 1975), and the economic loss to society.

Personal loss is high, as Cope and Hannah point out (1975): "Many students who do not complete their intended degree programs also experience a psychological loss; they are disappointed in themselves and must face the disappointment of family and friends" (p.6). Society stigmatizes a student who fails in education.

Instead of being only one of many ways to become educated and prepared for life, college has become a symbol of status, success, an insured financial ticket in the market place. At the same time, college failure is interpreted as a total inadequacy on the part of the student. These distortions have created a highly emotional and frequently irrational climate which can profoundly affect a young person, his family, and even his entire life.

(Pitcher and Blaushild, 1970, p.15).

Another fact that draws attention to the dropout problem, perhaps the biggest concern of college administrators and faculty members during the 1970s, is declining enrollment (Goodrich, 1980; Noel, Levitz, and Richter, 1999). This fact is especially important for most private institutions, where income derives largely from tuition and fees; therefore, each new student brings additional income, and each student retained

maintains that income. In the public sector, the bulk of income derives from state appropriations, which are usually allocated in direct proportion to projected enrollments (Astin, 1975). Other factors include decreasing budgets, restructuring, and increasing accountability requirements (Noel, Levitz, and Richter, 1999). With the enormous numbers of students who never earn degrees, student retention obviously should be a top priority in every college and university.

For an institution, the cost-benefit of improving student retention is very attractive, from both the economical and the educational points of view (Congos and Schoeps, 1997):

While administrators and faculty have traditionally seen recruitment as the principal means of keeping enrollments up, an equally promising approach is to reduce dropout rates. . . . Investing resources to prevent dropping out may be more cost effective than applying the same resources to more vigorous recruitment. More important from an educational standpoint, changes that help students complete college represent a real service to them, whereas successful recruiting efforts may simply change students' choice of institution.

(Astin, 1975, p.2).

From the economic perspective, both personal and social, student success is paramount. Higher education is absolutely vital to the economic success of persons, families, cities, states, and countries. Smith (2000) points out that healthy communities, a strong economy, and high quality of life depend on an educated citizenry and a well-prepared workforce. Educational achievement has always influenced earnings from employment. Better educated people have always earned more, and the gap in earnings

between those with high school diplomas and those with bachelor's degrees has grown in the last decades (Opportunity, 2003).

In recent years, the economic incentive to attend college has grown, especially when college is considered as an investment (Opportunity, 2003). Higher education is recognized as a gatekeeper to positions of high remuneration and status and is essential for most good jobs. The lack of education beyond high school is an increasingly formidable barrier to getting good jobs. Because of that, and despite high tuition and attendant costs, the only thing more expensive than attending college is not attending (IHEP, 1999).

Another important trend in higher education that focused attention on student engagement and retention, *the "Learning-College" movement*, started in America in the 1980s after the publication in 1983 of *A Nation At Risk* (The National Commission on Excellence in Education) which lambasted the "rising tide of mediocrity" in the nation's schools. Sadly, despite the shock, few fundamental changes were made in public schools. Similarly, in 1993 *An American Imperative: Higher Expectations for Higher Education* (Wingspread Group on Higher Education) triggered a wave of reform in higher education. The report recommended what many have come to view as a radical departure from past approaches: put learning first and change the historical architecture of post-secondary education. As a result, colleges and universities have enlisted in the Learning College movement, which hopes to produce "colleges that place learning first and provide educational experiences for learners any way, any place, any time" (O'Banion, 1995-96, p.22). Many schools have implemented innovative ideas with

positive gains in relevant learning indicators, such as student goal attainment and degree completion rates (O'Banion, 1997).

Conceptual Model for Student Success

A review of the literature on the topic of student success reveals a number of related, interrelated terms: (student) engagement, involvement, persistence, learning, and success, among others. If the goal is to achieve excellence in higher education—for students, institutions, and the state—then two questions arise: Are some of those terms related in cause-effect relationships? How can those terms be organized to enable action proposals for improvement? The answer to that question is crucial for the purposes of this study, since its main topics are student retention, engagement, and success.

An extensive research literature relates particular classroom activities, specific institutional practices, and student and faculty behaviors and interactions to high-quality undergraduate student outcomes (Astin, 1993; Chickering and Gamson, 1987; Pascarella and Terenzini, 1991; Sorcinelli, 1991). Research also shows that the degree to which students are engaged in their studies has a direct impact on the quality of student learning and persistence, and as a consequence, an impact on their overall educational experience. As such, indicators of student engagement can serve as a proxy measurement of quality (Kuh *et al.*, 2001).

The two well-known instruments that measure student engagement in higher education institutions in America, the NSSE for four-year institutions and the CCSSE for two year institutions, are designed with the understanding that institutional practices and

student behaviors are correlated highly with student learning and student retention, which in turn determine the quality of the institution and the degree of student success (CCSSE, 2004; Kuh, 2001).

Tinto (2004) helps clarify the relationship among the terms in question. For him, “student retention is the result of effective education. We must focus on student learning and those conditions that promote student learning. Student success will follow.”

Based on the findings above, the conceptual model diagrammed in Figure 1.1 can be used to explain the relationship among the terms under discussion. The model shows certain factors, institutional practices and student behaviors among, that affect student engagement, which is highly correlated with student learning and persistence—retention—which in turn determines the level of student success—the quality of the educational experience.

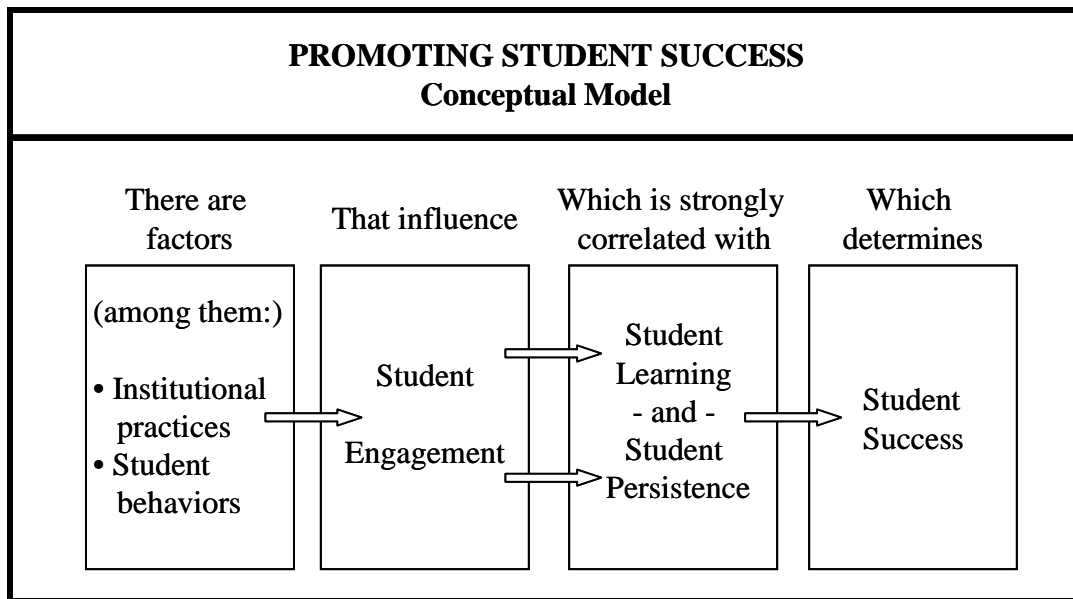


Figure 1.1 Conceptual Model for Student Success

The relationships described in this conceptual model focus this study on institutional practices and student and faculty behaviors and interactions that affect student engagement and student retention.

Statement of the Problem

One of the main academic goals of the Universidad de Monterrey, the site of the study, is to improve the quality of the educational experience and the success rates of its students. Little qualitative data exists, however, about the effect of institutional practices and student behaviors on those indicators. Data are needed to provide insight into students' perceptions of the factors that affect their engagement, in order to understand why they are so engaged better, and to develop and implement actions for improvement.

The goal described was chosen as the result of several important events. Through the institution's strategic planning process, faculty and administrators identified in the mid-1990s an area in need of considerable improvement: the student retention rate. About forty percent of the students who enroll at the school never graduate. Hoping to reduce the high dropout rate, the university initiated a student retention program (*UDEM's Retention Program*) in 1998. Since then, major causes of why students leave the University have been detected, as well as the profile of the freshman with high dropout possibilities. Numerous actions have been taken to increase the student retention rate with positive results, most heavily focused on at-risk students. Since the Universidad de Monterrey seeks "academic excellence"—its ambition is to be the best Mexican Catholic university by 2010—officials shifted the program's emphasis. Now

re-named *UDEM's Academic Success Program*, it seeks to make important gains in both student persistence and student learning.

Most available data regarding student retention and engagement at the institution is quantitative, from surveys and longitudinal studies. While that data is appropriate to studying reasons for dropping out and student satisfaction levels, it does not explore student experiences and perceptions. Without the insight provided by qualitative research, systemic changes needed to improve student success at the institution will be difficult to develop and implement. Additionally, most of the data available come from at-risk students and dropouts, not from students who succeed.

Purpose of the Study

The purpose of this study is to explore and analyze highly engaged student perceptions of factors that influence their engagement at a Mexican four-year institution, in order to understand why they are the way they are better, and to develop and implement actions to improve student engagement. While many factors influence student engagement, the study will focus on those related to institutional practices and student behaviors. Student perceptions will provide insight into how those factors affect their engagement, which is highly correlated with their learning and persistence and ultimately their success. Their perceptions will be used to make recommendations to the institution's leadership and faculty to strengthen or implement policies and practices that enhance student success.

Most of the retention and learning literature focuses on low-performing students, such as dropouts, stopouts, and at-risk. That is the case at the site of the study, an institution that has worked for about six years on a project aimed at improving its retention rate, working mainly with at-risk and dropout students. Since the institution seeks academic excellence; and since students who are “engaged” have a lot to say on the topic— what helps them stay engaged, learn, and persist—the perceptions collected in this study will come from such students.

Research Questions

The study aims to answer two overarching questions:

1. What are the factors that influence student engagement?
2. How do students perceive those factors?

Beside those questions, the following specific questions will guide the study:

3. What is the relative influence of the factors (on engagement)?
4. How do students assess the performance of those factors?
5. How are the identified factors related?

Significance of the Study

Student success is a major area of concern at the Universidad de Monterrey. There is need for action to improve student learning and persistence. As the literature

points out, student engagement improves a student's odds of graduating successfully (Tinto, 1993; Pascarella and Terenzini, 1991). But actions not based on strong evidence will very likely give poor results. A study of student perceptions of the factors that affect their engagement will benefit the institution which can "take immediate action when [it] determines which areas of student engagement need attention" (Kuh, 2001, p.12).

Analyzing the perceptions of "engaged" students, those who persist and show good academic and extra-academic performance will provide information helpful to the institution in its effort to improve the quality of the educational experience.

From the point of view of institutional effectiveness, the university will be able to better fulfill its educational mission, which includes the hope to "transform students holistically so they might perform to their utmost in the theaters of life and find transcendence in service to others." Each student who stays and graduates will be an additional success story. In terms of its vision, the institution will become the best Mexican Catholic university only if it achieves excellent results in student retention and learning. While most of its efforts are in student retention, this study will contribute to understanding the factors that influence student engagement.

Finally, although the results of this study may not be generalized, they will provide insights to Mexican colleges and universities to promote student success more successfully. Very little original research in the topic is available in Mexico, where—like in the US—student retention and success are paramount goals of higher education. Additionally, most of what is known is based on findings about dropouts, not successful students, and from quantitative instead of qualitative data.

Assumptions

To answer the questions above, this study makes several assumptions. First, it is assumed that a common understanding of what constitutes an *engaged* student can be developed and used with university faculty and officials while selecting study participants. Second, it is assumed that valuable results will be found, even only a few of the factors that affect student engagement will be investigated (institutional practices and personal behaviors), while others (student background, family characteristics, and environmental elements) will not. Third, following the practice of the NSSE survey, it is assumed that the perceptions of sophomore and senior students are the most representative. Finally, it is assumed that participants will share their experiences because they are relevant and not because they are considered engaged/successful students, which may polarize their opinions.

Limitations

The study has several limitations. First, inherent to qualitative research, people's personal perceptions can never be fully understood or empirically measured, so the verification of the student perceptions collected is beyond the scope and capacity of this study. Second, its results may not be generalized because of the size of the sample and because all the participants are associated with one institution. Third, some of the terms used in the literature may be unfamiliar at the study site due to translation and unfamiliarity. Finally, very little original research on the topic exists in México, so the

findings and results must be contrasted with literature developed mainly in and for US colleges and universities.

Definitions

Dropout is a student who withdraws from the institution before graduation. It occurs when any student who 1) is not enrolled in graduate or professional school, 2) does not have a bachelor's (or higher) degree, 3) is not currently enrolled as an undergraduate, *and* 4) has not been continuously enrolled since he or she entered college, has not completed four years of undergraduate work since he or she entered college and is no longer pursuing the bachelor's or a higher degree (Astin, 1975).

Freshmen are students enrolled in the first year of study.

A *persister* is a student who enrolls continuously until graduation. Is any student who at a specified time satisfies one of the following conditions: 1) is enrolled in graduate or professional school; 2) has earned the B.A. or higher degree; or 3) is still enrolled full or part time, and is still pursuing at least the B.A. degree (Astin, 1975).

Retention is the process of helping students meet their needs so they will persist toward achieving the educational goals they have previously set (Moxley *et.al.*, 2001).

Seniors are students enrolled in the last year of studies.

Sophomores are students enrolled in the second year of studies.

A *stopout* is a student who withdraws from college with the intention of returning. In the case of a four-year institution, is any non-persister who still plans to earn at least a bachelor's degree at certain time and satisfies one of the following

conditions: 1) is enrolled full time as an undergraduate; 2) has completed four years of undergraduate work at a certain time; or 3) has been continuously enrolled full or part time since the time he or she entered college (Astin, 1975).

Student engagement refers to the way students interact with classmates and instructors and the way they actually perform in and out of the classroom in terms of studying and other academic pursuits (Kuh, 2001), all practices correlated to student learning and persistence (CCSSE, 2004).

Student success is the attainment of educational goals, particularly graduation and higher levels of learning.

CHAPTER TWO

LITERATURE REVIEW

Overview

The body of knowledge developed through the years on improving student success in higher education, expressed in terms of learning and persistence, is vast. This chapter presents the perspectives and findings of educators, theorists, and practitioners who have studied the topic. Two main bodies of literature were reviewed, student retention and student engagement. The discussion focuses on student behaviors and institutional practices known to affect student success.

Understanding Student Retention

Administrators working on student retention in higher education usually focus their efforts on preventing students from dropping out. Who leaves college and why, therefore, are critical questions. In the past, retention has been thought to be a concern primarily for student affairs professionals, but today it has a broader scope (Tinto and Wallace, 1986; Volkein and Cabrera, 1997). Noel, Levitz, and Ritcher (1999), who have worked with over 620 institutions in the area of retention and enrollment management, claimed that “virtually every program, person and procedure on a campus have the potential to impact students and therefore retention” (p.3).

Models of Student Retention

How does the decision to drop out occur? What factors are involved? Researchers and retention theorists identify five different approaches to the study of retention: economic, societal, psychological, organizational, and interactionalist. Economic models emphasize the cost and benefits of a higher education to the individual person. Societal research considers the impact of dropout on society, while psychological constructs examine students' psychological maturity. Organizational constructs focus on the institutional characteristics that influence retention, and the interactionalist approach considers the interaction between the student and the institution (Braxton *et al*, 1997).

Some of the most recognized models and theories explaining the dropout phenomena in higher education include those of Spady (1970, 1971), Tinto (1975, 1993), Pascarella (1980), Bean and Metzner (1985), and Bean and Eaton (2000). The roots of current theories of retention lie in the research of the 1970-1980s. Those theories include the factors—behaviors, systems, practices, personal skills and qualities—that influence a student's decision to persist or drop out of college. Those variables are complex and many of them are beyond the control of both the student and the college. Many, however, can be controlled or at least influenced by the college or the student, and therefore it is valuable to know some of them. Because of its prominence within the retention literature, Tinto's model will be explained in further detail.

Tinto's Model of Student Retention

Probably the most researched and studied theoretical framework was the longitudinal model published by Vincent Tinto in 1975 and later updated in 1993. Braxton, Milem, and Sullivan (2000) claimed that "Tinto's interactionalist theory of college student departure enjoys near-paradigmatic status, as indicated by more than 400 citations and 170 dissertations pertaining to this theory" (p. 569). Tinto (1975) did not do an original study but synthesized others' research of that time, developing a longitudinal model to explain student dropout behavior. He described the process of dropping out of college as one of interactions between individual students and the social and academic systems of a college, what he termed social and academic integration. He maintained that people's experiences continually modify their goals and institutional commitments, which eventually lead to persistence or some form of dropout behavior. Pascarella and Terenzini (1979) considered Tinto's work important because it contributed to the overall understanding of the retention phenomenon as well as presented a formula for predicting it.

Originally, Tinto (1975) expanded Spady's work, which drew heavily on the theory of suicide as described by Durkheim, a nineteenth-century sociologist. According to Tinto, Spady observed that the behaviors of students who drop out of school were similar to those of people who contemplate suicide. Students choose to withdraw from a university the same as people considering suicide choose to withdraw from society, because they lack the shared values and norms needed to be integrated into the required social structure (Tinto, 1975).

After further study, Tinto (1993) enhanced his own theory by adding Van Gennep's theory of "rites of passage." As Tinto mentions, Van Gennep documented the tribal rituals of young boys moving from childhood to adulthood and the ceremonies and expectations that accompanied the transitions. Tinto related that to the student who moves through a separation stage that involves leaving the family and a transition stage into the college setting. Then follows an assimilation period during which the student either takes on the values and behaviors expected by the institution, after which he or she is incorporated into college life and persists, or has an unsuccessful experience and decides to leave (Tinto, 1993).

Tinto's model of college student departure has five basic constructs. They are student background characteristics, initial commitments, academic integration, social integration, and secondary or later commitments (Tinto, 1993). The model is presented visually in Figure 2.1 and its constructs are described briefly in the following paragraphs.

Background characteristics are those a student brings from high school and from home. They include such things as high school GPA, social skills, family socio-economic level, parental education, study habits, extra-curricular activities, and academic skills and abilities. Those characteristics influence a student's initial ability to be successful in college, which is necessary for persistence (Tinto, 1993).

Initial commitments include general educational goals and commitment to a specific institution. Many things influence the student: parents who have attended a certain college or who have never gone to college and dream of that for their child; the student's family situation, *e.g.* single or married; and the need of retraining because of

out-dated skills, among others. All are important aspects of the initial commitment to degree attainment (Tinto, 1993).

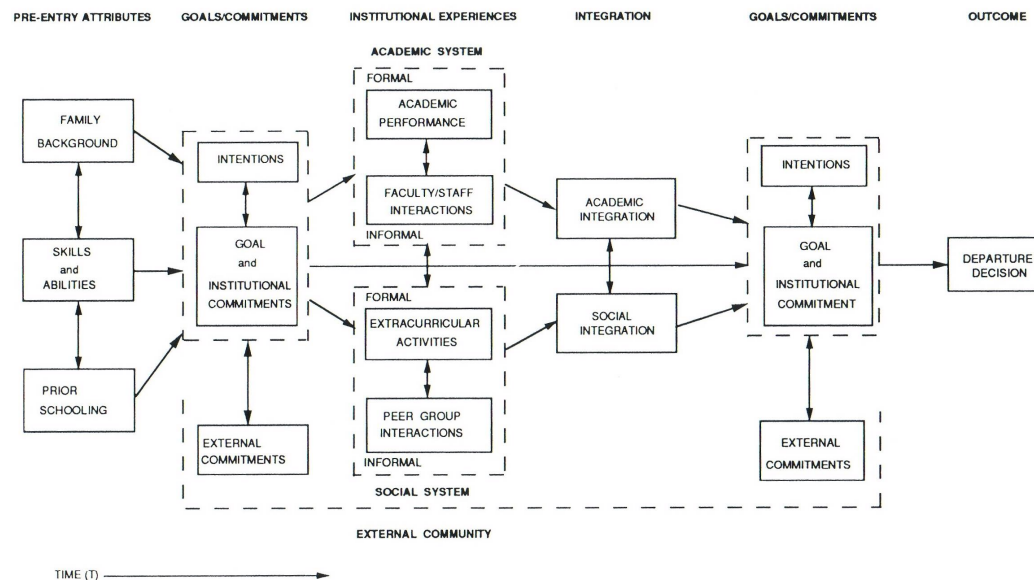


Figure 2.1 Tinto's Model for Institutional Departure (1993, p.114)

Academic integration in itself is not something to be measured but the summation of a student's intellectual development, involvement, and academic performance. Tinto further described this as the congruence between the individual student's attributes and those required by the institution's academic system (Tinto, 1975). It is the most visible area of student departure, because students who do not meet the institution's minimum standards of academic performance are not allowed to stay. Tinto (1993) also noted, however, that studies have shown that less than twenty-three percent of departures are due to academic failure or mandatory departure.

Tinto described *social integration* as the interaction between the student and the institution's social systems. This construct includes interactions with peers, informal contact with faculty, and non-academic extracurricular activities. Tinto (1993) described this area of dropout behavior in particular when citing Durkheim's theory of suicide. Tinto adapted Durkheim's "egotistical suicide," which results when someone is unable to become integrated and establish membership within a community in a larger society. Durkheim referred to two forms of integration, social and intellectual, which are the two forms for integration Tinto's model uses.

Secondary commitments occur when student rely on the interactions in the other four constructs and make a final determination regarding persisting or leaving. Again, external commitments and educational goals affect the decision, but academic and social integration are more important than background characteristics at this stage (Tinto, 1993).

The model implies that the entire educational process is one of continual change, as students interact with various aspects of the university and modify their commitment decisions. The cycle is continuously repeated, therefore, and students may leave at any time during the college experience (Tinto, 1975, 1993).

Tinto (1993) said that his theory was not a systems theory to be generalized, but rather that individual institutions should look at their own attributes of student departure and success, according to their unique characteristics of mission, culture, and student population. His theory clearly identifies the factors that affect student retention and engagement: background characteristics, institutional practices, and personal behaviors,

among others. Other relevant studies in the field also helped identify those factors. Because this study focuses on institutional practices and personal behaviors, it will address studies and findings related to them in greater detail.

Studies and Findings in Student Retention and Attrition

Based on the models mentioned or described above and in other research projects, numerous researchers and practitioners have carried out studies to learn the causes of student attrition. While some place special emphasis on one aspect of retention, others employed more holistic approaches.

In terms of a student's background, Astin (1975) suggests that a number of student background characteristics may be predictive: ability, secondary school grades, socioeconomic status, and educational aspirations, as well as students' own predictions of their chances of finishing college. The most "dropout-prone" freshmen, therefore, are those with poor academic records in high school, low aspirations, poor study habits, relatively uneducated parents, and small town backgrounds. Dropping out is also associated with being older than average, having Protestant parents, having no current religious preference, and smoking cigarettes. According to Astin, by far the greatest predictive factor is the student's past academic record and academic ability. Next in importance are the student's degree plan at the time of college entrance, religious background, and religious preference, followed by concern about college finances, study habits, and the educational attainment of the student's parents.

Other authors describe dropouts in terms of other factors. Singler (1976) advocates an interactive approach to identifying potential dropouts. He indicates that such factors as family background, choice of college, campus friendships, and support services interact with the student's personality to produce a successful student or a dropout. Interactionalist models and theories by Bean and Metzner (1985), Pascarella (1980), Tinto (1987, 1993), and Spady (1970) identify the confluence of institutional factors and individual traits that contribute to student persistence or attrition: personal traits, academic preparation, institutional commitment, and institutional characteristics. Additionally, such factors as parental expectations concerning college achievement (Hackman and Dysinger 1970) or interest in the college experience have been found to reduce the chances of a student's dropping out.

Many authors emphasize the fit between student and college. Schulman (1976) pointed out that the better students fit academically, socially, and motivationally into the environment of the colleges they attend, the less likely they are to drop out, stop out, or transfer. Those results are comparable with an earlier study by Newcomb and Flack (1964), which showed that students whose behavior did not conform to campus social norms were prone to drop out. Cope and Hannah (1975) point out that "our research tell us it is the *fit* between student and college that accounts for most of the transferring, stopping out, and dropping out" (p.3). Pascarella and Terenzini (1979) note the absence of significant interactions with other students as the single leading predictor of attrition. Tinto (1993) agrees that the degree to which students become socially involved is a great predictor of persistence toward academic goals.

Some studies focused on why students leave college. Astin (1975), in his renamed four-year study, which tracked 101,000 students and surveyed more than 43,000, asked students to check no more than three of twelve reasons for dropping out of college. The twelve reasons with the percentages of dropouts who checked each: boredom with courses (32%); financial difficulties (28%); some other reason, *e.g.* personal or emotional problems (28%); marriage, pregnancy, or other family responsibilities (23%); poor grades (22%); dissatisfaction with requirements or regulations (22%); change in career goals (19%); inability to take desired courses or programs (11%); good job offer (9%); illness or accident (7%); difficulty commuting to college (3%); and disciplinary troubles (2%). The most frequent reasons for dropping out are boredom, financial difficulties, dissatisfaction with requirements or regulations, and change in career goals. Results were also separated by gender. Women cited marriage, pregnancy, or other family responsibilities more often than any other reason (39%). Notably, poor academic performance is not one of the top reasons for leaving college. Many other studies—Summerskill, 1962; Pervin, 1966; Cope, 1978—corroborate Astin’s findings.

From the point of view of student retention, the first year in college is clearly critical. Most attrition occurs during the first two years, with the greatest percentage of withdrawal among the academically less talented (Tinto, 1993; Cope and Hannah, 1975). As Pervin, Reik and Dalrymple (1966) note, “half of all withdrawals throughout the U. S. occur by the end of freshman year. At the University of Iowa, over eighty-four percent of the withdrawals take place before the beginning of the sophomore year” (p.8).

Student Retention and the Promotion of Student Success

Numerous actions can be taken to improve student retention and success. While the initiatives implemented by colleges and universities vary widely, a comprehensive approach is most likely to produce better results (Phillips-Miller and Morrison, 1999).

A systems approach to retention. Isolated actions rarely improve student retention. What really works is a systematic approach in the implementation of a student retention initiative. Student retention affects and is affected by every area of the institution, and therefore a systematic, comprehensive approach must be used in order to improve the educational outcome (Noel *et al.*, 1985; Tinto, 1993, 1997).

Multiple areas can be approached to improve a student's odds of graduating from college. Some are:

Characteristics of the college. Less selective institutions have the highest rates of attrition (Cope and Hannah, 1975). Students maximize their chances of graduating by attending a private university in any region or a public four-year college located in the northeastern or southern states. Attending institutions with either Roman Catholic or protestant affiliations appears to increase the student's chances of completing college. Institutional selectivity is positively associated with student persistence, particularly among institutions of moderate size. This corroborates the idea that previous performance and academic ability are reliable predictors of student retention and engagement (Astin, 1975).

Matching student and institution. In general, persistence is enhanced if the students attend institutions in which other students' social backgrounds resemble their

own. Particularly relevant are the size of the student's hometown, the student's religion, and the student's race. If the student fits the new environment, greater chances exist that graduation will be achieved.

Financial aid. Receiving support from parents for college expenses generally enhances the student's ability to complete college, while students with scholarships or grants are associated with small increases in student persistence rates (Astin, 1975).

Academic learning experiences. At the heart of college education is the classroom learning experience. Tinto argues, "our efforts to promote student success must involve the classroom, the one place, perhaps only place, where students and faculty meet" (2004). Many possibilities can be used to involve students in learning, including: cooperative/collaborative learning (Mills and Cottell, 1998; Johnson, Johnson, and Smith, 1998); problem-based learning; service learning (Jacoby, 1997); learning communities (Fogarty *et al.*, 2003); supplemental instruction and study groups (Congos and Schoeps, 1997; Martin and Arendale, 1994); and classroom assessment (Cross and Angelo, 1993). By successfully involving students in learning experiences, they will spend significant amounts of time-on-task, one of the critical indicators of student engagement.

Intervention programs. Many programs and services can be implemented or redesigned across the campus to enhance student retention and success. Research concerned with preventing rather than explaining college student attrition has been concentrated in four major areas (Goodrick, 1980): 1) providing the high risk student with extended and personalized counseling from faculty members (Tinto, 1993; Drake

University, 1975; Kaye, 1972; Rickinson and Rutherford, 1995) or specially trained graduate students (Koloc, 1976); 2) supporting the development among exit-prone students of friendships and contacts with *significant others* on campus through small interest groups, special club activities, and student admission teams (Spring Arbor College, 1974; Ott, 1978); 3) mandatory counseling and study skills programs for failing students, as well as other counseling programs (Kaye, 1972; Drake University, 1975; Rickinson and Rutherford, 1995); and 4) experimental teaching programs such as the thirteen-college curriculum program, which separates dropout-prone students from the main academic stream and employs a totally separate program of study that emphasizes non-verbal rather than traditional academic abilities (Humphries *et al.*, 1972). Other areas of intervention are: academic advising (Tinto, 1993; Crockett, 1978), orientation programs (Dale, 1995; Rickinson and Rutherford, 1995), and early detection programs (Hurd, 2000).

Residence and campus/academic environment. There is a positive effect on the chances of graduating when students live in a dormitory or even in a private room or apartment. The student's GPA is more strongly related to persistence than any other student variable. Participation in extra-curricular activities, especially memberships in social fraternities or sororities, is also significantly related to staying in college. That information further confirms the student involvement theory: students who are involved in the academic life of the institution are more likely to expend the effort necessary to get good grades than are students who are not involved (Astin, 1975). Integration into

college life, particularly among minorities, is important for sustaining student commitment (Kalsner, 1991).

Effects of employment. Astin's study of student retention (1975) revealed interesting facts in this area. On one hand, having a part-time job (fewer than twenty-five hours a week) usually increases the student's chances of finishing college; on the other, full-time employment is to be avoided. On-campus work is generally preferable to off-campus work. Shifting from on-campus or no job to off-campus job is generally associated with an increase in dropout possibilities. The negative effects of full-time employment are especially pronounced when the student works off campus. Students with off-campus jobs are more likely to drop out the more their job is associated with career goals.

Retention can be ultimately viewed as a helping process in which relationship building is linked to individual strategies the parties use to achieve a desired educational outcome. Some of the key elements of the helping process are: reaching out to students who need support; forming strong, personal working relationships with those faculty and students that help them identify and achieve their aspirations; assessing what is going on; involving key stakeholders in actions steps and strategies; keeping the door open through follow-up; and assisting students to transition in their educational careers and endeavors (Moxley, Najor-Durack and Dumbrigue, 2001).

Understanding Student Engagement

Besides student retention, the other body of literature that is highly correlated with student success is that of student engagement. Kuh (2001) described student engagement as the way in which students interact with their classmates and instructors, and the way they are actually doing in and out of the classroom in terms of studying and other academic pursuits. According to the findings of prominent researchers and scholars, certain institutional practices, classroom activities, and student and faculty behaviors and interactions are related to high-quality undergraduate student outcomes (Astin, 1993; Chickering and Gamson, 1987; Pascarella and Terenzini, 1991; Sorcinelli, 1991). These practices and behaviors tend to foster student engagement and improve student learning and persistence as a result. As a final result, the overall educational experience is more meaningful (Kuh *et al*, 2001).

Based on the above, indicators of student engagement can serve as a proxy measurement of quality (Kuh *et al.*, 2001) and student success. Those elements also describe the characteristics that define academic and social integration in Tinto's model. Kuh (2001) also notes that the time and energy that students devote to educationally purposeful activities are the single best predictor of their learning and personal development. Tinto (1990) confirmed that what promoted student learning also promoted student retention.

Of the institutional practices that lead to higher levels of student engagement, some of the most often referred to are those developed by Chickering and Gamson (1987), *Seven Principles of Good Practice in Undergraduate Education*. These

principles include student-faculty contact, cooperation among students, active learning, prompt feedback, time on task, high expectations, and respect for diverse talents and ways of learning. Additionally, institutional environments that were perceived as welcoming by the student and where expectations were reasonably high are important to student learning. All of these factors are positively related to student satisfaction and achievement (Kuh, 2001).

There are several ways to identify those institutional practices and student behaviors that determine student engagement. Probably the best sources are the surveys administered by the National Survey of Student Engagement (NSSE) and the Community College Survey of Student Engagement (CCSSE), administered to four-year and two-year colleges, respectively.

Late in the 1990s, The Carnegie Foundation for the Advancement of Teaching and the Pew Forum on Undergraduate Learning co-sponsored a new survey, the National Survey of Student Engagement (NSSE), to measure what students actually did during their college experience. The survey questions were based on the good educational practices developed by many experts and were administered first on experimental basis and later officially to those four-year institutions that decided to participate in the process. The survey is applied annually to a representative sample of freshmen and seniors in each participating institution. A similar development occurred with CCSSE, which started operations in Fall 2003.

As a result of the study, national, peer (based on Carnegie 2000 institutional classification), and institutional benchmarks were established for five general areas of

educational practice and included various aspects of student and faculty participation: level of academic challenge, active and collaborative learning, student interactions with faculty members, enriching educational experiences, and supportive campus environment. The elements included on each of the benchmarks are mentioned as follows (Kuh *et al*, 2001).

Level of academic challenge: time spent preparing for class, amount of reading and writing, using higher-order thinking skills, working harder than expected, and institutional expectations for academic performance.

Active and collaborative learning: participating in class, making presentations, collaborating with classmates on projects during and outside of class, tutoring others, discussing coursework outside of class, and participating in community-based projects as part of class assignments.

Student interactions with faculty members: talking with faculty members and advisors, discussing ideas from classes with faculty members outside of class, getting prompt feedback on academic performance, and working with faculty members on research projects.

Enriching educational experiences: talking with other students who have different religious beliefs, political opinions, values, or ethnic backgrounds, using electronic technology for assignments, participating in internships, study abroad, community service work, self-designed major, co-curricular activities, or culminating senior experience.

Supportive campus environment: the extent to which students perceive the campus environment encourages them to succeed academically and socially, cope with non-academic responsibilities, and is supportive of relationships between other students, faculty, and administration offices and personnel.

Student Engagement and the Promotion of Student Success

The importance of the NSSE and CCSSE models/surveys is two-fold. First, it helps institutions identify which are the institutional practices and student behaviors that most enhance student engagement, the questions the survey asks and the main focus of this study. Practices such as student-faculty interactions, time on task, and the level of challenge of different academic activities are highly correlated with student learning and persistence. Second, it helps institutions gain insight into what their students are really thinking and doing. By knowing “how well are we doing”, faculty and administrators can focus their efforts on fostering those practices and promoting those behaviors that will have a positive effect in student success. Another positive aspect of the NSSE initiative is that it relates the quality of the institution to student outcomes and not just to the institution’s resources.

In a more detailed fashion, Kuh *et al.* (2001) suggest that college and university representatives can use NSSE data to: 1) evaluate the relative strengths and weaknesses of the undergraduate experience; 2) answer campus and department specific questions about student learning and retention; 3) focus discussions about the quality of undergraduate education at faculty retreats and governing board meetings; 4) inform

internal academic reviews and strategic planning processes; 5) prepare self-studies for accreditation and other external reviews; 6) support student recruitment, alumni and public relations, and fundraising efforts; 7) identify aspects of the student experience who needs additional study; 8) look to high-performing schools in certain areas of educational practice to discover what these institutions are doing and how they achieved the high level of performance; and 9) use student engagement findings to inform complementary teaching and learning initiatives.

The power of data, particularly in measuring student engagement, is unequivocal. Some examples are provided in the following paragraphs.

One of the questions of the NSSE survey asks the amount of time students spent studying. In the 2000 application of the survey, of the 75,015 students surveyed, seventy-nine percent said their institutions emphasized at least two hours of homework for each hour of class; yet ten percent of the full-time students said they spent five or fewer hours a week working on all classes, and forty-seven percent said they spend only six to fifteen hours per week studying. Apparently, there was a gap between expectations and reality (Kuh *et al.*, 2001).

Another example of the usefulness of the survey to discover areas of improvement was in the area of student interactions with faculty. Research indicates that this is an important aspect of student learning (Kuh, 2001) and academic and social integration (Tinto, 1993), yet it was the lowest of the benchmark areas in the 2000 application of the survey. None of the 276 institutions surveyed scored higher than 45.1 on the 100-point scale for first-time students, and the mean was 31.2 (Kuh *et al.*, 2001).

Summary of Findings

Research shows that promoting student success is paramount for society, since its effects on students, their families, and the economy and society are dramatic. No wonder many states are launching major initiatives to get more people into higher education and to improve their odds for success, like the “Closing the Gaps Initiative” in Texas, which aims to enroll 500,000 more students in higher education than population growth alone would account for by 2015 (THECB, 2004). Not to do so will invariably mean a decrease in the living standards of Texans and on the power of the Texas economy.

How to improve student’s success is, then, a major question. The literature shows that certain factors affect student engagement, which is strongly correlated to student learning and persistence, two of the major effectiveness indicators in higher education (Roueche *et.al.*, 1997; Roueche *et.al.*, 2001; Johnson, 1997; Alfred *et.al.*, 1999; Astin, 1991). In the long run, as Tinto says (2004), “student success will follow.”

Numerous theories, models, and studies help to identify the factors that affect student engagement and persistence. Some of the most complete are Tinto’s model for student attrition and the NSSE and CSSEE models for student engagement. All were produced taking into account most of the research and best practices available on the topic, the sources the researches used to identify the student behaviors and institutional practices that affect student engagement and persistence.

Among the most relevant student behaviors are: commitment and maturity; study and learning habits, which are influenced by the level of academic challenge students

face and reflected in the GPA; participation in extracurricular activities; and interactions with parents, students, faculty, and other college officials.

Among the most relevant institutional practices are: academic learning experiences; intervention programs, support services and financial aid; campus environment; and expectations of students, which are influenced by people inside and outside the college.

Two important conclusions reappear in virtually each piece of literature on student success: 1) the fit between the student and the college affects the odds for success most; and 2) the first year in college is critical in integrating students to their new environment both academically and socially. In other words, if students fit and survive the first year, their chances for graduation improve dramatically.

Interestingly, most of the literature published before 1990 focuses on research about dropouts; most of the literature published after 1990 focuses on strategies to improve student success. That shift in perspective implies a lot: today faculty and administrators focus their efforts on engaging and retaining students, rather than on understanding why they fail.

Another interesting finding is the remarkable similarity among the strategies that can be used to improve either student retention or student engagement. Without taking into account those aspects related to the students background which can not be altered—family, high school GPA—practically any action to improve student retention will also improve student engagement and vice versa, contributing therefore to the ultimate goal of improving students' odds for success. This makes sense in the context that there are

institutional practices and student behaviors—*causes* which can be altered—that improve student persistence and learning, and ultimately student success—*effects* which cannot be altered directly.

CHAPTER THREE

METHODOLOGY

Overview

This chapter describes the methodology used in this study—a qualitative methodology with a naturalistic approach—as well as the rationale for that choice. The specific qualitative methodology used, Interactive Qualitative Analysis (IQA), is also described. Included in the chapter are a reiteration of the purpose of the study, research questions, and statement of the problem.

Purpose of the Study

The purpose of this study is to explore and analyze highly engaged student perceptions of factors that influence their engagement at a Mexican four-year institution, in order to understand why they are the way they are better, and to develop and implement actions to improve student engagement. While many factors influence student engagement, the study will focus on those related to institutional practices and student behaviors. Student perceptions will provide insight into how those factors affect their engagement, which is highly correlated with their learning and persistence and ultimately their success. Their perceptions will be used to make recommendations to the institution's leadership and faculty to strengthen or implement policies and practices that enhance student success.

Most of the retention and learning literature focuses on low-performing students, such as dropouts, stopouts, and at-risk. That is the case at the site of the study, an institution that has worked for about six years on a project aimed at improving its retention rate, working mainly with at-risk and dropout students. Since the institution seeks academic excellence; and since students who are “engaged” have a lot to say on the topic— what helps them stay engaged, learn, and persist—the perceptions collected in this study will come from such students.

Research Questions

The study aims to answer two overarching questions:

1. What are the factors that influence student engagement?
2. What are the students’ perspectives of those factors?

Beside those questions, the following specific questions will guide the study:

3. What is the relative influence of the factors (on engagement)?
4. How do students assess the performance of those factors?
5. How are the identified factors related?

Qualitative Research / Research Design

The research will be undertaken through a qualitative analysis of individual and group perspectives of the elements that influence student engagement. Interactive Qualitative Analysis (IQA) is the qualitative research method chosen for this research.

The rationale for using qualitative research is that the study seeks to collect student perceptions of the elements that influence their engagement with their educational project. Qualitative research allows for a rich explanation of perceptions and experiences. Since focus groups and participant interviews are the basic data collection techniques used in IQA, “direct quotations from people about their experiences, attitudes, beliefs, and thoughts” will be used “in order to find out what people have to say in their own words” (Patton, 1980, p. 23).

The approach of this study is naturalistic, since the researcher does not attempt to manipulate the research setting but to investigate phenomena “within and in relation to their naturally occurring context” (Willems and Raush, 1969, p. 3). Undergirding this approach is the belief that those who have the experience are the most knowledgeable (Lincoln and Guba, 1985). Data collection will be conducted at the study site in an attempt to avoid manipulation. In this connection, Patton:

[In naturalistic inquiry] the research setting is a naturally occurring event, program, relationship, or interaction that has no predetermined course established by and for the researcher. Rather, the point of using qualitative methods is to understand naturally occurring phenomena in their naturally occurring states.

(1980, p. 41)

Because qualitative methods use the researcher as an instrument in the data collection and analysis process, self-reflection will be used throughout the research process to achieve high quality standards (Patton, 1990). (More on this topic in the last section of this chapter.)

Since the purpose of the study is to identify the elements that affect student engagement and to explore student's perceptions about them, this study is inductive. Patton argues:

Qualitative methods are particularly oriented toward exploration, discovery, and inductive logic . . . are inductive to the extent that the [researcher] attempts to make sense of the situation without imposing pre-existing expectations on the program setting. Inductive designs begin with specific observations and build toward general patterns. Categories or dimensions of analysis emerge from open-ended observations as the evaluator comes to understand the existing program patterns.

(1985, p. 15)

Since, however, the study seeks not only to identify the factors that affect engagement but also to identify the relationships among them, elements of deduction will be used:

IQA insists that both deduction and induction are necessary to the investigation of meaning. Participants themselves are first asked to induce categories of meaning (induction), then to define and refine these (induction and deduction).

(Northcutt and McCoy, 2004, p. 16).

The methodology that will be used to develop the present study is Interactive Qualitative Analysis (IQA), a qualitative data gathering and analysis process that depends heavily on group processes to capture a socially constructed view of the respondents' reality. Developed by Norvell Northcutt and associates at The University of Texas at Austin, IQA employs a systems approach that utilizes techniques adapted from the Total Quality Management (TQM) movement and from Systems Theory to produce and analyze data generated through focus groups and interviews. IQA allows groups of people to identify, label, and describe experiences and the relationships among these experiences to produce a theory of perception (Northcutt and McCoy, 2004). A detailed description of IQA is provided later in this chapter.

Site of the Study

This study will be conducted at the Universidad de Monterrey (UEM) in Monterrey, a city in the northeast of Mexico, 140 miles from the United States border. Monterrey is an industrial city with more than three million inhabitants; there are around 60 universities and more than 8,000 factories.

The University of Monterrey is a private institution, founded on Christian inspiration in 1969. It is non-profit, and its only campus is in Monterrey. It has 6,615 students studying in 23 undergraduate programs, 359 studying in 7 graduate programs, and 2,203 studying in its high schools.

Undergraduate students enroll in the program of their choice from the first semester. All programs have a duration of nine semesters, with the exception of

medicine which takes longer. UDEM's 23 undergraduate programs are grouped in five major divisions (schools): business; design, architecture, and engineering; medicine; law and social sciences; and humanities and education.

Fifty-seven percent of UDEM's undergraduate students are female, forty-three are male. The average age is twenty, and most of the students are between eighteen and twenty-four. Eighty-seven percent are full time. The majority come from medium-low, medium, and medium-high socio-economical segments. Twenty-five percent receive some kind of financial aid. The institution does not offer on-campus housing, and sixty-nine eighty percent of its students came from the state of Nuevo León, where the city of Monterrey is located. Those from Monterrey typically live with their parents. The graduation rate after four years of study at the institution is forty-five percent. It is estimated that fifty-five percent of the students graduate after six years.

Statement of the Problem

One of the main academic goals of the Universidad de Monterrey, the site of the study, is to improve the quality of the educational experience and the success rates of its students. Little qualitative data exists, however, about the effect of institutional practices and student behaviors on those indicators. Data are needed to provide insight into students' perceptions of the factors that affect their engagement in order to develop and implement actions for improvement.

The goal described was chosen as the result of several important events. Through the institution's strategic planning process, faculty and administrators identified in the

mid-1990s an area in need of considerable improvement: the student retention rate. About forty percent of the students who enroll at the school never graduate. Hoping to reduce the high dropout rate, the university initiated a student retention program (*UDEM's Retention Program*) in 1998. Since then, major causes of why students leave the University have been detected, as well as the profile of the freshman with high dropout possibilities. Numerous actions have been taken to increase the student retention rate with positive results, most heavily focused on at-risk students. Since the Universidad de Monterrey seeks “academic excellence”—its ambition is to be the best Mexican Catholic university by 2010—officials shifted the program’s emphasis. Now re-named *UDEM's Academic Success Program*, it seeks to make important gains in both student persistence and student learning.

Most available data regarding student retention and engagement at the institution is quantitative, from surveys and longitudinal studies. While that data is appropriate to studying reasons for dropping out and student satisfaction levels, it does not explore student experiences and perceptions. Without the insight provided by qualitative research, systemic changes needed to improve student success at the institution will be difficult to develop and implement. Additionally, most of the data available come from at-risk students and dropouts, not from students who succeed.

Participants and Data Collection

Since several studies at the institution have collected opinions of dropouts and low-performing students, this study will explore the perceptions of engaged students in

an attempt to understand their reality better and to strengthen policies and practices that promote student excellence.

Following the guidelines of the NSSE survey that surveys freshman and senior students, fifteen students will be selected from the rising sophomore class at the end of their freshman year and fifteen from the senior class. Purposeful sampling will be used to select the students (McMillan, 2000; Schwandt, 1997). Program heads and faculty of each of the five academic divisions will be asked to nominate about twelve “engaged” students until sixty are nominated with the expectation that thirty will participate in the study. Each division will have at least three sophomore and three senior students, following Patton’s suggestion that “findings from even a small sample of great diversity provides important shared patterns that cut across cases and derive their significance from having emerged out of heterogeneity” (1990, p. 172).

Two focus groups with at least fifteen participants each, one for freshman and one for seniors, will identify the factors that affect student engagement at UDEM. Later, those students will be interviewed in depth and surveyed to explore their perceptions about the identified elements.

Defining if a student is or is not “engaged” may present difficulties. A simple definition will be used in this study to select participants. “Engaged” students: enjoy and are committed to their major; have not been expelled from any other university; have persisted since the beginning of the program; have a GPA of at least 8.0 (the Mexican scale based on 0-10 scale stipulates 6 as “fail” and 7 as “pass”); participate in different

institutional activities; and have a good chance of graduating in ten or fewer semesters in all.

Once the participants are selected, they will be invited to participate in the study “because their experience is relevant” without mentioning that they are considered “engaged” students, since that could affect their responses.

IQA Methodology

The Interactive Qualitative Analysis (IQA) methodology comprises four major steps: research design, data collection, data analysis, and data interpretation. According to Northcutt and McCoy (2004), the product of an IQA study is a description of the elements implied in a phenomenon and a visual representation of their relationship, prepared according to rigorous and replicable rules for the purpose of achieving complexity, simplicity, comprehensiveness, and interpretability. Both the general and detailed descriptions of the methodology provided below are based on *Interactive Qualitative Research: A Systems Method for Qualitative Research* (Northcutt and McCoy, 2004).

IQA: Four Steps at a Glance

Research design includes the definition of: the problem (an issue that is either interesting or needs attention); the purpose of the study; the research questions; and the identification of constituents (those who have something to say about the problem). *Data collection* is usually made through focus groups and through individual interviews. The

focus group(s) identifies “affinities” (issues or factors of importance) and the relationships among them. In one-on-one interviews, each individual describes his or her understanding of each of the affinities and the relationships among them. *Data analysis* gives meaning to each of the affinities based on the opinions, experiences, and the perceptions of the participants from each constituency, and identifies the relationships among those affinities according to the understanding of different constituencies (each individual and each constituent group as a whole). *Data interpretation* allows the researcher to elaborate on the definition of the affinities, to explain the placement of the affinities in the mindmap, to make comparisons among all the mindmaps (focus groups, individuals, composite) and to “exercise” the model to simulate intended scenarios; additionally, conclusions, recommendations, interpretations, and theoretical implications are generated.

IQA: Detailed Description

IQA is now presented first as it flows in a typical study and then each step is described in further detail.

IQA METHODOLOGY: RESEARCH FLOW

1. Research Design
 - 1.1 Definition of the problem
 - 1.2 Purpose of the study
 - 1.3 Research questions
 - 1.4 Identification of constituencies (selection of participants)

2. Data Collection
 - Group Reality:
 - 2.1 Focus groups formation
 - 2.2 Identification of factors (affinities)
 - 2.3 Identification of relationship among factors
 - Individual Reality:
 - 2.4 Constructing an interview protocol
 - 2.5 Conducting interviews (factors description and relationships)
 - 2.6 Preparing interview transcripts
3. Data Analysis
 - 3.1 Description of factors (interview analysis)
 - 3.2 Description of relationships among factors (mind maps)
4. Data Interpretation
 - 4.1 Discussion: factors descriptions, systems comparisons, and predictions
 - 4.2 Conclusions, recommendations, implications
 - 4.3 Theoretical implications

1. Research Design

Usually, IQA research starts with a vague problem and then tries to identify people who have something to say about it. The scope of the study is limited in this stage, since there can be numerous constituencies for a given problem, including those who have experienced the problem or those who have power over it. After the problem and constituencies have been defined, the purpose of the study and research questions can be defined. The study will address the following basic questions: What are the components of the phenomenon in question? How do those components relate to each other in a perceptual system? When more than one constituency is included, how do the systems compare?

All those elements have been defined for this particular study in previous sections.

2. Data Collection

Data collection starts as soon as the researcher or the research team has defined “the problem” (the issue to be investigated), using focus groups and individual interviews. A particular study can have as many focus groups and the correspondent interviews as needed. Data collection produces a “group reality,” which includes the elements of the phenomena and its relationships (represented in a system or *mindmap*) and an “individual reality,” that includes the perceptions/experiences of each individual about each element. The steps to carry out the data collection are as follows.

2.1 Focus Groups Formation

The people who have something to say about the problem are identified and brought together to form a focus group, which is a group of people who share some common experience or work, or live within some common structure, or have a similar background. The researcher thinks first about commonalties rather than differences when designing the composition of the group. IQA focus groups are formed with groups of individuals who may certainly have varied opinions of and experiences with the system under study but who more critically share a common perspective.

Two focus groups of at least fifteen students will be formed, one with “engaged” freshmen and one with “engaged” seniors.

2.2 Identification of Factors (affinities or categories of meaning)

Identification of factors—the elements, affinities, or categories of the problem of the study—is a process that involves four steps and begins once the focus group is brought together. The steps are a) silent, nominal brainstorming, b) clarification of meaning, c) affinity grouping, and d) affinity naming and revision. The steps are outlined below.

a. Silent Nominal Brainstorming

The first step for an IQA focus group is silent brainstorming. The facilitator first describes the problem to the group, usually through a discussion of the problem, through visual stimuli, or by reading a “guided imagery,” a narrative that evokes the context of the problem. Later the focus group is asked to write their experiences about the subject on note cards; one thought per card. After producing as many cards as they can, the focus group is asked to tape the cards along a wall in rows and columns where all can view them.

b. Clarification of Meaning

Through a group discussion, the facilitator guides participants in clarifying their understanding of the responses on each card to eliminate any ambiguity or vagueness associated with the meanings of the words or phrases. The facilitator or a member of the group reads each card aloud. The group reaches consensus on the meaning of the card in the clarification of meaning activity, during which the foundations are laid for

constructing, through discourse, a shared reality among group members. The purpose is to arrive at a socially constructed, shared meaning of each card among the group. The purpose is also to clarify the meaning of the words or phrases on the cards. Each participant of the focus group reflects on every card to achieve clarity and consensus on the meanings of the words. Even though each card was written by one person, the anonymous author has no more claim on the meaning of the card than any other group member; anyone in the group may offer an opinion about the meaning of a particular card.

After the clarification conversation, the participants may choose to add more reflections and thoughts to the original body of index cards. The facilitator encourages any further production of responses and a second clarification discussion, if necessary, to ensure that the responses reflect the individual and shared experiences of the group members relative to the issue statement.

Advantages of the Clarification Process:

- The discussion creates a richer understanding of the written comments and a shared understanding of the responses.
- The discussion engages participants who need to interact to gather their thoughts and prompts additional data to be produced.

Disadvantages of the Clarification Process:

- Individuals who are attached to specific definitions can disengage if the group constructs a different understanding of a response.
- Participants may grow impatient and begin clustering ideas prematurely.

c. Affinity Grouping (Inductive Coding)

Upon completion of the clarification of meaning, the facilitator asks the participants to organize the cards silently into groups of meaning (recognizing themes or commonalities within their many responses). The purpose of affinity analysis is to cluster or categorize the cards via not yet articulated, but nevertheless meaningful, criteria. Inductive coding is the most common name used for this process. Therefore, inductive coding seeks to identify affinities.

d. Affinity Naming and Revision (Axial Coding)

This phase seeks to name, reorganize, clarify, and refine the affinities. Once the affinities are refined and repeatedly reorganized, the group participants are encouraged to narrow the meanings of the affinities and their categories. Major categories of affinities are reviewed and may be combined or divided into hierarchical systems of sub-affinities. Then participants are asked to give titles to each affinity. Those titles should accurately reflect the meaning of the affinity, and are documented on header notepads and placed at the top of each vertical column. Participants can later sort any cards that may have been placed in to an inappropriate group into the proper group.

2.3 Identifying Relationships Among Factors (Focus Group)

The purpose of this phase is to identify the relationships among the factors (affinities) found and to represent them in a picture of the system, called a System Influence Diagram (SID), that represents the perceptual terrain or the *mindmap* of a group with respect to a phenomenon represented by the issue statement. IQA provides a variety of protocols for building the group SID, which are described briefly as follows. Focus groups or individual interviews could reveal relations among factors. This study uses the latter but describes both.

a. Identifying Pairs of Relationships

With the affinities clearly defined, the group is asked to analyze the nature of relationships between each of the affinities (in an activity called theoretical coding). They are given three rules for analyzing all possible pairs: $A \rightarrow B$ (A affects B), $B \leftarrow A$ (B affects A), or no relationship. They are asked to record their responses in an Affinity Relationship Table (ART), which is a matrix containing all the perceived relationships in the system (see Table 3.1). This study uses individual interviews.

Affinity Relationship Table			
1	\rightarrow	2	
1	\leftarrow	3	
1	\rightarrow	4	
1	\rightarrow	5	
2	\leftarrow	3	
2	\rightarrow	4	
2	\rightarrow	5	
3	\leftarrow	4	
3	\rightarrow	5	
4	\leftarrow	5	

Table 3.1 Sample: Affinity Relationship Table

b. Summarizing the Relationships: Constructing the Group IRD

An Interrelationship Diagram or IRD is a table that summarizes the results of all the relationships among the affinities, and is produced after the usage of certain mathematical procedures (including the Pareto Principle), which identifies the relationships that cause the majority of the variation within the system.

Therefore the IRD (see example in Table 3.2) is a diagram with numbers representing each affinity and directional arrows indicating the cause and effect relationship between any two affinities.

Interrelationship Diagram								
	1	2	3	4	5	OUT	IN	Δ
1		↑	←	↑	↑	3	1	2
2	←		←	↑	↑	2	2	0
3	↑	↑		←	↑	3	1	2
4	←	←	↑		←	1	3	-2
5	←	←	←	↑		1	3	-2

Table 3.2 Tabular Interrelationship Diagram (IRD)

The relationships among the affinities are then represented in the Sorted Tabular IRD (Table 3.3), which sorts the affinities based on cause/effect criteria. Those affinities that will be “causes” in the system are placed at the top of the table and those that will be “effects” are placed at the bottom of the table. In the first row, it can be seen that Affinity 1 affects Affinity 2. Every pair of affinities now has a defined relationship. This will be useful later, both for constructing an interview protocol and for constructing a mindmap (SID) for the focus group.

Sorted – Interrelationship Diagram								
	1	3	4	5	6	OUT	IN	Δ
1		↑	←	↑	↑	3	1	2
3	↑	↑		←	↑	3	1	2
2	←		←	↑	↑	2	2	0
4	←	←	↑		←	1	3	-2
5	←	←	←	↑		1	3	-2

Table 3.3 Sorted Tabular IRD

c. Creating the Picture of the System (Group SID)

The System Influence Diagram (SID), also called mindmap, is a visual representation of an entire system of influences and outcomes. The affinities are the elements in the SID, and the way they are connected to each other represents the relationships among the elements. The diagram is constructed based on the IRD and a specific protocol provided by IQA. Some of the more influential elements are called “drivers” (primary or secondary), and the elements that are more influenced are called “outcomes” (primary or secondary). The graphic representation of relationships paints a vivid picture of system dynamics for both investigator and participants and lends itself readily to analyzing how modifications might change the nature of the system. One of the unique characteristics of SIDs (compared to traditional path diagrams) is that recursion or feedback loops are allowed. In Figure 3.1 is an example of an SID.

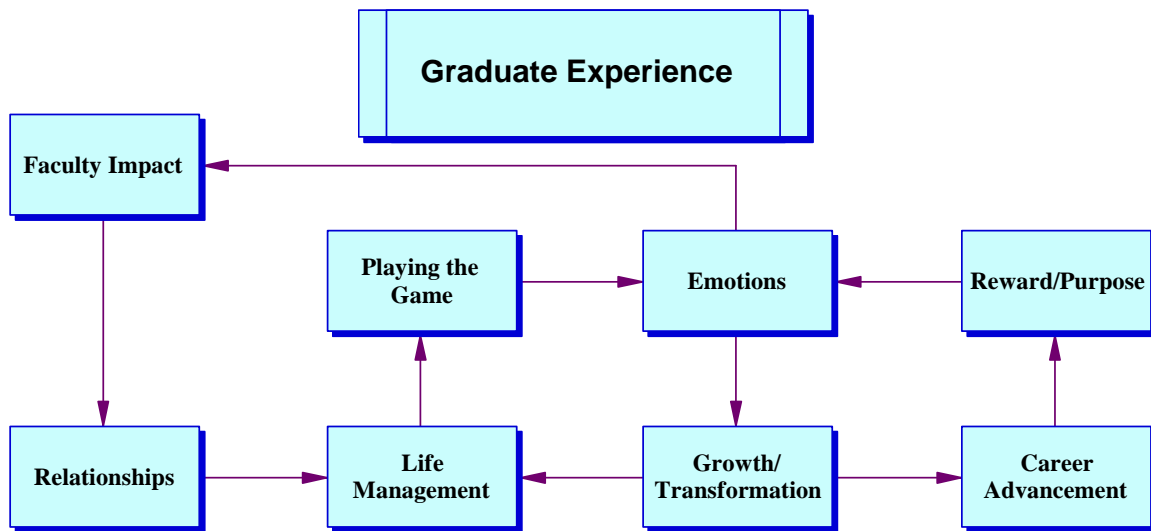


Figure 3.1 An Example of a SID

The Group SID will facilitate the individual interview process and will be useful also in phases 3 and 4 of the IQA Methodology: data analysis and interpretation.

2.4 Constructing an Interview Protocol

The affinities produced by the focus group are used to create an interview protocol, which is used with each participant to collect his or her experience with each of the affinities and the relationship among them. The interview protocol, therefore, consists of two parts, the axial interview (descriptions, meanings, experiences) and the theoretical interview (relationships among elements).

a. Axial Interview

The open-end axial interview is derived from the affinity write-up and is designed to provide rich descriptions of affinities by the respondents, including their definitions,

experiences, perceptions, recommendations, and desires. The interviewer uses the name of each affinity and its description (write-up) to ask the respondent a question such as, “What does this (the affinity) mean to you? Tell me about your experience with this.”

b. Theoretical Interview

The structured theoretical interview is designed to identify relationships between affinities and asks the question, “How does this affinity relate to that one in a system of perceived cause and effect? Tell me about it.” The question is asked about each pair of possible relationships. The respondent can use an affinity relationship table to examine how he or she perceives the connections between all possible pairs of affinities.

2.5 Conducting Interviews

The interviewer will prepare for the interview with attention to the areas of content familiarity and logistics. Some guidelines are provided as follows.

a. Typical Interview Setting

The researcher establishes a relaxed atmosphere that encourages the interviewee to respond to each question sincerely. A conversational flow should transpire so that the questions and answers feel more like a conversation than an interview.

Careful set-up of logistics helps the interviewer reserve attention for focusing on the interviewee. The logistical set-up includes performing an equipment sound check for recording the interview, securing a new tape and batteries to eliminate potential

problems, and having print-outs of the affinity relationship table with a quick reference list of affinities. The objective is to prepare effectively to keep attention focused on the interview for observing and responding to the interviewee.

b. Typical Interview Procedure

Critical to the success of the interview is a thorough understanding of the interview protocol and each affinity within it. Although the interview will begin with the questions agreed to in the interview protocol, the interviewer must be able to respond to and move with the flow of conversation created by the interviewee's answers.

Total familiarity with the affinities to be addressed also allows the interviewer to free up all attention to listen and respond to the interviewee, rather than worry about skipping or repeating an affinity question.

The interviewer opens the interview with a friendly greeting, introductions, and a description of the research study and the respondent's role. Discussions of confidentiality, the anonymity of the interviewee, the use of a tape recorder to record the discussion, and a description of how interview results will and will not be used establish expectations and agreements between the interviewer and the subject. Once the interviewee agrees to the conditions, the questions begin.

2.6 Preparing Interview Transcripts

After the interview, the researcher should prepare a transcript of the interview, which includes two main parts: the axial interview and the theoretical interview. The

transcript must be clean and organized; that means, among other things, that no personal names must appear in the transcript. In Tables 3.4 and 3.5, excerpts from transcripts (axial and theoretical) are provided.

The interview transcripts will be useful in the analysis and interpretation steps of the IQA Methodology.

AXIAL INTERVIEW

Q: Well, that sounds like you are having interaction with those people, and with many other people, something like relationships; relationships that you have with the faculty and maybe other people in or out of the school. Let us talk about relationships... the focus groups that gave us ideas to discover these affinities, describe the relationships, this affinity, as interactions with peers, with other students, with faculty, with friends, with family, and connections out of the school like in other schools and industry. **Tell me about your relationships** and your experience in graduate school.

A: Certainly the relationships with the faculty members, some faculty members maybe have more in common with or you relate to better, for different reasons. I have some faculty members that I am very comfortable sitting down and sharing my thoughts and ideas. Some, I found myself feeling a little bit more guarded with. As far as students, it is the same thing with other graduate students and I think that is typical and any type of situation, that you have some that you naturally move towards as far as speaking with. Some people that you have more commonalities with, so you may be a little closer relationships with them. As far as having relationships with another, other graduate students on campus, you really do not. We pretty much stay in the School of Education for the most part. I am looking forward to going to the Business School, hopefully, and doing my outside courses over there.

Table 3.4 Excerpt from Axial Interview Transcript

THEORETICAL INTERVIEW

- Q: Do you see a **relationship**, if any, between **Career Advancement and Relationships** – Affinities 1 and 7?
- A: Relationships, I think that also affects career advancement. I think if a person cannot handle multiple relationships and also is not good at nurturing relationships then, you know, they are not going to advance in their careers.
- Q: I see. And what is the **relationship** between **Career advancement and Reward** – affinities 1 and 8?
- A: In that case I think the reward, in part, is the career advancement, so I think it would be the opposite way; that one would affect eight.
- Q: So the outcome here is reward?
- A: Right. That career advancement, affects reward
- Q: How do you explain that? Give me an example please.
- A: Career advancement, would represent one of the rewards of the hard work put into graduate school.
- Q: So, in that case, career advancement would lead you to have that reward?
- A: That is right; that personal reward. It would lead me to that personal reward.

Table 3.5 Excerpt from Theoretical Interview Transcript

3. Data Analysis

Data analysis is basically the transformation of the information collected through the interviews into both statements and representations that reveal how the individuals (as individuals and as a group of individuals) visualize a specific phenomenon. Data analysis will provide: 1) a rich, composite description of each of the elements (affinities) of the system, which results from finding and putting together similar statements among the descriptions of the same affinity produced by different participants; and 2) a visual

representation of how the elements are interrelated among them (individual and composite mindmaps).

3.1 Description of Factors (Axial Interviews Analysis)

After all the individual interviews are done and transcribed, all of them will be combined to produce rich, composite descriptions of each of the affinities. The researcher will find patterns among the responses of the interviewees using the interview axial code table (ACT) and the combined interview axial code table (CACT) as tools.

Individual interviews. Each participant’s axial interview will be documented in the Individual Interview Axial Coding Table (ACT), the primary documentation for all utterances that illustrate the range of meaning of each affinity for each respondent. Lines separate different “themes” or statements in each affinity. Table 3.6 provides an excerpt of an Interview Axial Code Table (ACT).

Individual Interview Axial Code Table Respondent: 13			
Affinity	Line	Axial Quotation	Researcher Notes
1. Career Advancement	163	I think I cannot be the very best that I can be until I have my Ph.D. under my belt.	She considers her PhD essential in her career.
	169	For me, my desire is to be a Ph.D., finish my Ph.D. And that, combined with my work experience --years of work experience in the private and public sector—will boost my career.	

Table 3.6 Excerpt from Axial Code Table for Respondent # 13

Combined interviews. Using a combined interview axial code table (CACT), the researcher identifies similar axial codes by noting key words or phrases that describe or illustrate an affinity. Quotes relating to a specific affinity can be cut and pasted into the CACT, along with the line(s) of the transcript that were the source of the axial quote. There will usually be multiple axial quotes for any given affinity; each quote represented by another row in the CACT. Table 3.7 provides an excerpt of an Interview Axial Code Table (ACT).

Combined Interview Axial Code Table			
Affinity	Respondent /Line	Axial Quotation	Researcher Notes
1. Career Advancement	13 / 163	I think I cannot be the very best that I can be until I have my Ph.D. under my belt.	She considers her PhD essential in her career.
	5 / 144	You also have to make sure you are really looking inside of yourself and evaluating what you know to be your competencies, your strengths, and your weaknesses.	
	7 / 127	I feel confident of what I am doing, of what I can achieve, so it is not the fear that affects you to do something bad.	

Table 3.7 Excerpt from Combined Interview Axial Code Table

Finally, the researcher will be able to produce a rich composite description of each affinity. Usually, each affinity is followed by a group of statements. Table 3.8 provides an example of final affinity description.

Description of Factors (Affinities)
Combined Data / Constituent Group: Graduate Students

Element/ Affinity: **Career Advancement**

The PhD. provides the credentials and unlimited possibilities for career advancement. The expectations of others, sense of becoming better, influencing change, are also critical components of it.

Expectations of me. Others' *expectations* are a part of the graduate experience. "The biggest fear that I have is failing because there are so many expectations of me. I am the first person in the family to go to the University of Texas and many people are waiting for me in my hometown saying, 'We are paying for him. We are waiting for him to come back.'"

I will be able to move on to better things. Upon the completion of the program, the possibilities for *career advancement* are unlimited. "I rely on the faculty to help make decisions as far as my career is concerned. I have to give the faculty and my mentors the idea or impression that I am somebody worthy of some of the opportunities this program actually awards us. I have to continue to do everything I can to produce a great product. Everything that I am doing here is very important because everything will be on my resume."

Being the very best. The PhD. is a means of *becoming better*. "For me, my desire is to be a Ph.D. I think I cannot be the very best that I can be until I have my Ph.D. under my belt. You also have to make sure you are really looking inside of yourself and evaluating what you know to be your competencies, your strengths, and your weaknesses. I feel confident of what I am doing, of what I can achieve, so it is not the fear that affects you to do something bad. It is more the type of fear that motivates you and keeps you aware of where you are and what you are doing."

Table 3.8 Excerpt from Final Affinity Description (Composite)

3.2 Description of Relationships Among Factors (Mind Maps)

Relationships - Diagrams. At this point, three different types of SIDs (System Influence Diagrams) can be obtained: one produced by the focus groups participants; one for each of the participants; and one that combines all the individual interviews (in case those interviewed are not the same who participated in the focus group). Preparation of a SID was explained in section 2.3.c. The preparation of an individual SID follows exactly the same procedure, using the relationships suggested by the respondent in the theoretical section of the interview. (Actually, an individual SID is easier than a composite one, since each possible relationship in the systems is “voted” just once, hence eliminating some mathematical procedures.) To produce a Composite SID from the individual interviews, the researcher combines the relationships expressed by each of the participants and then produces a “Composite SID,” following the procedure explained in step 2.3.a. through 2.3.c. This study prepares composite SIDs for both the freshman and senior focus groups.

Relationships – descriptions. In the same manner that IQA produces a combined description of the meaning of each of the affinities, it produces a combined description of the relationships among the affinities. After the SID is done, each of the direct relationships represented in the SID (represented by arrows between two given affinities) will have its own description, prepared based on the comments given by the respondents who identified that particular relationship. Using data from the theoretical interview transcript, an individual interview transcript code table (TCT) is prepared for each respondent. Later, a combined interview theoretical code table (CITC) is prepared with

the comments of all respondents who identified that relationship. Finally, each relationship is described in a narrative prepared using similar theoretical codes from the CITCs. Table 3.9 provides an example of final affinity-relationships description.

<p style="text-align: center;">Description of Relationships Combined Data / Constituent Group: Graduate Students</p>
<p><i>Relationship: Growth/Transformation → Career Advancement</i></p> <p>Growth/Transformation affects the opportunities that exist for career advancement. This includes more positions to be occupied, more and higher responsibilities, and the possibility to make a higher impact.</p> <p>More positions. The graduate experience and a higher degree open doors for many new job opportunities. “I spend about seven years working in the same position, with little opportunity to change or to learn something else. Now, as I am close to finish this program, I have received several attractive positions for very diverse jobs. I know that with this degree, my career will improve a lot. With that, I mean I will have the credentials that will give me access to almost any administrative position available in Higher Education. I now I will leave the administrative area and I would be able to explore, learn and perform in areas such as academic affairs or student affairs... and that will mean a lot for my career.”</p> <p>More and higher responsibilities. Upon the completion of the program, more and higher responsibilities are given for most of the graduate students. “The president of my college said, ‘as soon as you’re done with the program, we will be able to promote you to a dean’s position’. Several years ago, I had the desire to perform in finer, higher responsibilities, such as department chair. But I lacked the credential to hold such a position. With this degree, I will be able to apply for them. There is a line between your preparation and the responsibilities given to you. The more prepared you are, the higher the position you’re given. That is why I am here.”</p>

Table 3.9 Excerpt from Final Affinities Relationship Description (Composite)

4. Data Interpretation

Data interpretation is the forum where the researcher interprets the data and draws conclusions. Recommendations and implications are generated in this section as well. It includes a discussion of factors and systems, conclusions and recommendations, and theoretical implications.

4.1 Discussion: Factors, Systems

Each of the factors (affinities) can be discussed in the light of the system as a whole, from each constituent group's perspective. The general "status" of the affinity can be used to evaluate institutional programs and improvement projects, to identify areas of improvement, and to understand and explain particular phenomena, using the "understanding" of a particular group on a particular factor.

Interpreting each system as a whole, as a "set of elements interrelated," can be done by discussing the System Influence Diagram. Numerous elements can be discussed: the overall placement of the affinities; the "timbre" of the system (positive, negative, degree of variation among participants); the feedback loops; and the scenarios produced after exercising the model. These two elements are discussed further below.

Recursions or feedback loops are especially worthy of analysis. Feedback requires at least three affinities and has no beginning and no end. Previous affinities (those placed toward the driver zones) influence successive ones (those placed toward the outcome zones), which in turn influence previous affinities. A feedback loop or a

recursion reveals a unique relationship among certain elements that must be noted by the researcher.

Exercising the model implies that certain affinities are given a particular condition, therefore affecting the general timbre of the system. If that affinity is located in the drivers zone (the factors that can be considered primarily causes, not effects), it is likely that it will affect the “performance” of the whole system. To illustrate, a researcher can predict what will happen to the overall satisfaction of a graduate student’s experience by giving the affinity “faculty-student interaction” a given status.

Data interpretation also includes comparing systems. In case there is only one constituent group, comparisons can be made between the composite system (focus group) and individual systems. In case two or more groups were incorporated in the study, then their systems can be compared to generate conclusions about how each group explains the phenomena under investigation.

4.2 Conclusions and Recommendations

The analysis and interpretation undertaken to this point allows the researcher to generate conclusions and recommendations about the system and about its particular elements. Research questions and the problem of the study are good sources to visit while identifying conclusions and recommendations. If one of the research questions was “to identify trustees’ perceptions about their roles,” the researcher can generate the following conclusion based on the data: “Most of the trustees lack a clear idea of what their responsibilities are.” Conversely, if the study problem started with the idea that the

institution is not achieving its fundraising goals, the researcher can generate the following recommendation: “Trustees must be appointed and trained keeping in mind that fundraising is one of their major responsibilities.”

4.3 Theoretical Implications

To return to the literature is a good idea. The researcher returns to the literature, this time looking for theories and other streams of research, scholarship, or thought that may inform the findings. It is expected that the researcher think beyond the narrow conceptual scope of the data to examine broader possibilities, including explanation for some of the findings or recommendations for further research, as well as similarities and differences between findings and theoretical models. How well the literature explains the findings and why that happens are crucial elements to be discussed in this section.

Validity

This qualitative study attempts to produce results of high quality by observing the appropriate criteria. According to Lincoln and Guba (1985), trustworthiness in a qualitative study consists of credibility, transferability, dependability, and confirmability. By using IQA methodology, the researcher is committed to comply with those criteria. A brief explanation of how each criterion will be met follows.

Credibility is the correspondence between the respondents’ perceptions and the way the researcher portrays the data (Mertens, 1998). To ensure the study’s credibility, the researcher will use triangulation, peer debriefing, and member-checking techniques

as recommended by Lincoln and Guba (1985). *Triangulation* is the use of multiple and different sources of information. While this particular study will collect students' perceptions of their engagement, that information will be checked against other sources as needed, including faculty, program heads, and administrators. *Peer debriefing* is a process wherein the researcher engages a disinterested peer to provide an external check on the inquiry process. This study will incorporate opinions from both a dissertation committee and individuals that know the institution where the study will be carried out but have no conflict of interest with this particular study. Finally, *member checking* consists in verifying with the participants providing the data that their opinions, perceptions, and recommendations are well represented by the researcher. For the results of the focus group, this study plans to conduct a check session with a representative sample of the participants (four to eight) to review the transcript of the session and the interview protocols that will be generated after the focus group session. Later, the researcher plans to conduct a checking session with each participant after the transcript of the interview is transcribed.

Transferability implies providing sufficiently thick description for a reader to reach conclusions regarding using the results in different contexts or situations (Lincoln and Guba, 1985; Mertens, 1998). By using IQA, the researcher plans to collect and provide thick descriptions about the nature or the elements considered in the study (institutional practices and student behaviors) and the relationships among them. Chapter Four will be rich in descriptions and textual quotations.

Dependability. To satisfy this quality criterion all available data must be accounted for and the appropriate inquiry decisions must be ensured (Lincoln and Guba, 1985). To account for all available data the researcher will follow strict use of the IQA methodology, which includes very detailed procedures related to data and its management. The appropriate inquiry decisions will be reached by continuously revisiting the research plan, a thorough understanding of the IQA methodology, consultation with people with ample experience in research methodologies, and additional literature review.

Confirmability means that the researcher does not contrive data and data interpretation (Mertens, 1998). To achieve confirmability, study results will be presented in such form that each statement can be tracked to its original interview transcript. IQA provides reliable tools for that purpose. Each interview will be numbered and transcribed, and transcript lines will be numbered. The descriptions IQA generates (from both the elements and the relationships among them) are based on the composite tables (Composite Interview Axial/Theoretical Tables), which contain statements from different interviews, clearly identified with interview and line number. Thus, only information that can be traced to its original sources will be presented as results and used to generate conclusions and recommendations.

CHAPTER FOUR

RESULTS

Overview

This chapter describes: 1) the way the participants for the research were selected; 2) the activities undertaken to collect and analyze the data; and 3) the answers to the study's five original questions.

As mentioned in Chapter One, five questions guided this study, and were answered according to the opinions of freshman and senior highly engaged students. The questions are: 1) What factors affect their level of engagement? 2) What are their perceptions and experiences related to those factors? 3) What is the relative level of influence of each factor? 4) How do they judge the quality, performance or present condition of each factor? and 5) How are the factors related?

Data Collection and Analysis Activities at a Glance

In the stage of data collection and analysis, the following activities were undertaken: 1) Sixty (60) highly engaged students were identified to participate in the study, 30 freshmen and 30 seniors. 2) The factors that affect their level of engagement were identified in two focus group sessions, one for freshmen, in which 19 students identified 8 factors, and one for seniors, in which 16 students identified 7 factors. 3) Interviews with 15 freshmen and 15 seniors identified student perceptions about those

factors. Combined narratives were generated from the data, one for each group. 4) The relative influence of each factor on the level of student engagement was identified. Since the factors the freshmen and seniors identified were almost identical, a single list of 9 factors was generated and used in a survey of 14 freshmen and 16 seniors to evaluate their relative influence. The result was a list of 9 factors, listed from the most influential to the least. 5) The level of performance of each of the 9 factors was evaluated. To do that, the 9 factors were broken down into 52 sub-factors, which were used in a survey of 14 freshmen and 16 seniors. The result was a list of 52 factors evaluated from the perspective of quality, for both freshman and senior students. Finally 6) the relationship among the factors was identified in interviews with 15 freshmen and 15 seniors using the IQA procedures described in Chapter Three; among the results are two visual presentations, or mindmaps, showing how the factors are interrelated, one for freshmen, one for seniors.

Participants: Selection and Demographics

To insure the participation of at least 30 students in the study (15 freshmen and 15 seniors), a total of 60 candidates were selected. The researcher met with groups of no fewer than three full-time faculty from each of the institution's 5 academic divisions and asked them to propose 12 candidates, 6 freshmen and 6 seniors. In those nominating sessions, the researcher described the participant profile—a highly engaged student. Some of the characteristics mentioned were: participates effectively in class; meets academic responsibilities; shows interest in the major; makes good grades; participates in diverse university activities; and has good relations with faculty and fellow students (Kuh, 2001; CCSE, 2004). At no time were sex, civil status, scholarship/no scholarship, home, or socio-economic level mentioned. The faculty in each division nominated the 12 candidates by consensus until the 60 needed were selected.

Of the 60 original candidates, 36 students took part in one or some of the data gathering activities. The profile of those students appears in Table 4.1.

At no time were the participants told they were invited because they are considered highly engaged students. They were told only that their names were chosen at random and that their experience would be relevant to a study of their formative experience in the institution. Once the data gathering and analyzing activities were done, including the activities related to validity—described in Chapter Three, a letter was sent to the students, thanking them for their participation and emphasizing that the faculty consider them successful students.

Participant Demographics			
Variable	Freshmen	Seniors	Total
Number of participants	19	17	36
Female (number/percentage of participants)	13 / 68%	13 / 76%	26 (72%)
Male (number)	6	4	10
Age (average)	19.2	21.3	20.2
Single, never married, no children (%)	100	94	97
Out of town (%)	29	19	23
Present semester, out of 9 (avg)	3.3	8.1	-
First university experience (%)	93	94	93
Has changed major (%)	21	13	17
GPA (average)	91	95	93
Graduating on time or early (%)	100	100	100
Plan graduate studies (%)	93	93	93
With scholarship (%)	71	81	77
Work-study on campus (%)	50	50	50
Works off campus (%)	0	38	20
Hrs per wk work off campus (avg)	na	21	21

Table 4.1 Participant Demographics

Factors that Influence Student Engagement

To answer the study's first question—What factors influence student levels of engagement?—two focus group sessions, for freshmen and seniors, were organized. The 30 available “candidates” were invited by a letter to the focus group meetings. Both sessions proceeded according to the guidelines in Chapter Three, included a “guided imagery” warm-up exercise. Both lasted roughly 2.5 hours, were facilitated by the author and a university officer, and took place in a classroom. The results follow.

Freshmen: factors that influence their engagement

The freshman focus group met on Tuesday, November 2, 2004. Nineteen (19) students, 13 women and 6 men, generated a total of 318 ideas (factors) which were grouped under 8 principal and 29 secondary categories. The results are in Table 4.2.

FACTORS THAT INFLUENCE STUDENT ENGAGEMENT Freshmen		
FACTOR		Sub-factors
1	Personal Aspects	Personal values; personal qualities and attitudes; habits and skills; personal situation; student behaviors.
2	Personal Hopes and Goals	Goals; hopes and commitments.
3	Relevant People	Parents; family; friends and boy/girlfriend; others.
4	Faculty	Faculty; program head; leaders (officials).
5	Fellow Students	Fellow students.
6	Academic Program (major)	Major / courses; assignments, exams, and academic rigor; class schedule; connectedness; institutional issues; other.
7	Extracurricular Activities and Scholarships	Extracurricular activities; scholarships.
8	Services and Infrastructure	Facilities; library; IT services; parking lot; classrooms; other.

Table 4.2 Freshmen: Factors that Influence Engagement

Seniors: factors that influence their engagement

The senior focus group met on Thursday, November 4, 2004. Sixteen (16) students, 13 women and 3 men, generated a total of 447 ideas (factors) which were grouped under 7 principal and 33 secondary categories. The results are in Table 4.3.

FACTORS THAT INFLUENCE STUDENT ENGAGEMENT Seniors		
FACTOR		Sub-factors
1	Personal Aspects	Attitudes; interests; habits and skills; goals, expectations and commitments; personal situation.
3 ¹	Important People	Family; friends; fellow students; others.
4	Faculty and Personnel	Faculty; program head; leaders (officials); others.
6	Academic Elements	Major design; academic rigor; classes; closing experiences; assignments; big sections; other.
7	Extracurricular Activities	Courses and activities, social service; student groups; events, student exchange; other.
8	Educational and Administrative Services	Library; cafeteria; scholarships; other.
9	Facilities	Facilities; parking lots; computer services; other.

Table 4.3 Seniors: Factors that Influence Engagement

¹ Note: The factors are not numbered consecutively intentionally to allow comparison between freshmen and seniors.

Student Perceptions of the Factors that Influence Engagement

The second question of the study—What are student perceptions/experiences of the factors that affect their engagement?—was answered using the procedure described next, based on Chapter Three. Of the freshmen, each individual participant was interviewed for about an hour. The interviews were carried out in an unused classroom at the hour the student suggested and following a protocol based on the 8 factors the freshmen focus group identified. A total of 15 interviews were undertaken, recorded, and transcribed. With the 15 transcripts, the author identified common themes and created a single narrative, combining and grouping the perceptions of the 15 students under common themes and sub-themes. The freshmen were interviewed between November 8 and November 26, 2004.

A similar procedure was used to identify and document the seniors' perceptions. Once more 15 students took part and were interviewed for the same period of time, using the interview protocol based on the 7 factors the senior focus group identified.

Next come, first, the combined perceptions of the 15 freshmen, then those of the 15 seniors. Everything between quotation marks are textual commentaries from the students. Not in quotation marks are the author's interpretations of each factor, generated after analyzing the participants' comments.

Freshmen perceptions of the factors that affect engagement

1. Personal Aspects

Successful students show a positive attitude and a desire for improvement. Further they say that good habits are the key to success, among which they mention: good personal organization, discipline, constancy, and good time management. They say they've always been that way, particularly because their parents or their first school years inculcated those attitudes and habits in them. Their classroom behavior reflects their high performance: they take part, they accept responsibility, they're courteous, and they establish good relationships with classmates and teachers.

“Everything starts with attitude and desire. If you have positive attitudes, you’ll do well.” *Successful students exhibit a positive attitude, personal responsibility, self-confidence, an interest in discipline, and a strong desire to get ahead.*

“I believe it’s very important to realize that you’re here and why you’re here and apply yourself the way you should. Maturity is the most important, you know? We didn’t come to play but to learn, to prepare ourselves. Like my friend says, “I don’t have time to waste time.” I take going to classes seriously. Why? Because I know it’ll help me in the future.

Personally, I think I’m a very positive person. I always see things with optimism. Something good is bound to happen. If you have a positive attitude, everything is easier. I’m not going into it, but I have been through some situations, Criminy! Economic, family, health. But attitude is what counts. You can’t overcome my optimism easily. I have a lot of confidence in myself. I know what I can do, and I’m not afraid of what’s facing me.

I am really interested in my degree, in going ahead. I like almost all the courses, and I always try to remind myself that I’m here to learn, what can I tell you? I love my major, I

am passionate about learning. Well, I don't like some courses, but I pay attention anyway, because I know they're going to help me in life.

I like to improve myself, show what I can do, I like to win. I don't conform. At times I think, "Oh, I don't care, I'm not going to study." But then when I get my grades, even if I get 90 I get irritated and say, "No, I know I can do better. Why 90?" Then I try harder, because all the homework and assignments and so on, I'm never going to get a zero. I'm always looking for 100, at least!"

“Good personal habits are the key to success.” *More than intelligence, luck, or resources, habits determine student success.*

“I believe you need lots of things to succeed in school, but your habits are the most important. You are who determines your organization, the way you use your time, the way you go about your studies.

I believe skills and habits are the biggest influence on student success and good grades. Personally, I think I'm very intelligent, but in class the people who get good grades are the ones who study and try hard, not necessarily the smartest. I'll tell you: to succeed in school, trying hard is more important than being smart. As for the personal aspects, skills and so on, I believe they're very important because they lead you to grow in your major and in your courses at UDEM . . . If you don't have desire and discipline, it doesn't matter how much your parents help you or how smart you are or how much the faculty motivates you or teaches you. You have to work hard and enjoy it.”

“Of course I know which habits lead to success!” *Certain key skills and habits—discipline, consistency, personal organization (activities, possessions), time management—characterize successful students.*

“I believe that habits like consistency, discipline, and organization are important. Good habits get you a 10. If a student is persistent, turns work in on time, and organizes things, he'll get a 10. Discipline and persistence count. Some of us who are very smart at times forget about being orderly, and that's when we get lower grades.

If I want to do well in school I have to use the best habits I have, and I believe the most important of them is to organize your possessions and activities well.

Personally I am very organized. I like to have everything under control. I am in charge of my room, my notebooks, my studies, my time, my life. I know when I have to get up, clean up, or study. I believe personal organization has helped me get ahead, and I think my teachers think that too. Have you noticed how teachers hate disorganized students? The ones who want to turn in work late or come late to class, the ones who always forget something, the ones whose grandmothers are always dying.

I have a system, all organized by priority, to organize my work and my activities. Whatever is most important or is worth the most or the course I'm not doing so well in or where I need to raise my grade, that's what I do first and where I put in more time. The rest is like a ladder, and I just take it one step at a time.

As for my study habits, I like to have a date book and write everything down, both school things like exams or homework, and also things that don't have anything to do with school, like parties or family events. I always come home and put my date book on the bed to find out what I have to do. I almost always prefer to do homework after I eat lunch, because in the evening I want to relax and do what I want. I go to bed early. I like to get to sleep early.

No, no. You know what's important? Discipline. You have to schedule yourself to study and stick to it. It's very clear to me: feeling lazy or hassled is easy, but if your schedule says you study, then study!

I try to manage my time and organize my activities. During the week, it's 100% school. No going out, no television, just study, so I can have the weekend to myself. That's why I stay at school every afternoon and leave at night. It doesn't matter if I'm late getting home, although I do like to enjoy the weekend to do my own thing or rest or go out or something like that."

"My habits come from my family and my teachers." *Student values, habits, and qualities are strongly influenced by the teaching and behavior of parents and teachers.*

"I believe that in your studies and your professional life, everything around you affects you, including your parents and your teachers. I have good study habits, but I owe

them to my mother and my teachers. When I talk about my habits, I have to talk about my family and my teachers or their influence reflected in my habits.

If you want to do well, you need the skills and habits that you bring with you from childhood. When you get here if you don't reinforce them or if you just don't try, you're going to lose out.

I think I'm a good student and have been since elementary school. When I was a girl, several friends flunked fifth grade, but I didn't. Although I was the youngest girl in my class, my parents told me, "You're doing fine in school and you can get ahead." And then, sort of unconsciously, I feel that I can do anything I put myself to, because my parents drilled that into me. I've always been that way. I have never done badly in a course, and I'm not talking about 8s but 9s and 10s. I think I'll always do well.

My parents taught me good habits ever since I was a little girl. I've never had problems. I've always made good grades. I've never had trouble doing assignments or homework, and I think that's good. They never rewarded me; it was always, "That's your responsibility." Now I don't do it because I have to, because I don't study if I don't want to. I do it because I enjoy it and because I know it's best for me. My parents did a good job!

High school had a big influence on me as a person, on the way I see life here as a student. My teachers were critical to all that, because I had the opportunity to form some really great friendships among them. They helped me discover and develop skills I didn't know I had, and then I'd look at myself and say, "How neat that I can do that!" And it really motivates you when your teachers and friends say, "You're doing really great." This has always happened to me. I get excited when I think about it, because thanks to my high school teachers, I've become a successful, winning, happy person."

"Your personal situation, the situation of your life, affects your student life." *Health aspects, personal finances, whether you live with your family or not, emotional stability, and self-esteem influence student performance directly. Nevertheless, students with more character or clarity of goals can overcome difficult personal situations more easily.*

“Personal and emotional aspects really influence your study habits, because if you’re having problems, you lose time taking care of them and you don’t pay attention to your personal organization. It’s not that you can’t overcome those barriers, but it’s easier if your life is balanced, don’t you think?”

I’m in the third semester now, and every semester has been different for me, because I’m not from here and I’ve lived in three different places, one each semester. That way I’ve had to get used to taking care of myself from the beginning. I’ve had to organize myself differently to get ahead. It’s been an experience in growing and showing that, in spite of loneliness and weariness, you can get ahead. Being alone is hard.

As for my personal situation, negative things affect me positively. For example, right now my family is in an economic chug-hole, but instead of thinking about what we can’t do, we just have to try harder, because you have to do that to get results.

I try to keep my personal life orderly so I can do well at school and at home. I don’t get involved in problems. I do exercise, I go to bed early, I sing and listen to music to stay in a good humor, I don’t smoke, I eat right when I can, and thank God I’m healthy, and my home is financially and emotionally stable. “Everything under control,” I say, but I’ll tell you, I really admire my friends who try really hard even if they have problems. They’ve got character, don’t they?”

“Successful students act like successful students.” *Committed and involved students are punctual, reliable, respectful, participatory, curious. Further they invest enough time in student activities and establish good interpersonal relations with fellow students and teachers.*

“I always pay attention in class, although I don’t say much and hardly take part because I don’t like to talk a lot. That doesn’t mean I’m not paying attention. I’m there!”

I’ve always been a very participatory person. I loved to take part in class even when I was a little girl. When a teacher says something, if I don’t understand or want to say something, I don’t just sit there. I talk and see what’s up, good or bad, no matter. And if I look like a fool, so what? I like to talk.

As a student, I think I'm pretty restless, not that I disrupt things, but I want to know everything about the courses, what my field and profession are all about. I mean, the teachers talk to us, and I say, "Show me that in a real case." And I always take part or ask questions. I am very participatory.

How would my teachers say I'm doing in school? They'd say that I take part, that I ask questions, that I do the assignments, that I'm friendly, that I like to get along with them, that I ask them things outside class, about everything, not just class. What else? Well, they'd say I always come to class and get there early, that I don't leave early, that I don't go to sleep, that my face reflects my interest. You know, parents like good kids, and teachers like good students!"

2. Personal Aspirations and Goals

Successful students say their hopes and goals are a motivation to go ahead and a guide for action. Their short, mid, and long term goals are clear and ambitious: do graduate work or find a good job, become businessmen, start a family, be happy, realize themselves, leave a mark. They are committed to their dreams and for that reason behave the way they do and overcome obstacles that occur.

“Having hopes and goals in your life is important. It’s the motor!” *Hopes and goals are motives that keep you going, that give meaning to your actions.*

“Goals are always the motivation to follow, what gives you strength to get ahead. If you don't want a future for yourself or if you're planning a future that does not involve the university, then it wouldn't make sense to be here. Those goals guide me. I think knowing clearly what you want will help you do things right, do them and enjoy them.

I want to be whole and happy. God and my parents gave me the chance to be here, studying in a first class university, and I'm going to take full advantage of that. My main goals are to satisfy my parents, to thank them for everything they've given me by earning a

degree. And in the future I see myself doing something to better society, doing something new for others.

I want the satisfaction of finishing a degree.

What motivates me to try hard and try to be a good student is the recognition you get from being successful in school and your personal life.”

“My goal is very clear, super clear, there it is.” *Committed, involved students have clear, ambitious short, medium, and long term goals.*

“What is my goal? Well, I’ve got lots! They are clear, and I know where I’m going. My goals are to finish my degree and graduate, to learn a lot and enjoy being a student. Graduate work later. Get a good job and succeed professionally. Start my own business and make it prosper, be a successful businessman. And a little later, get married and have a lovely family.

I want to learn a lot about everything. There are lots of conferences and congresses here, and I always like to participate in all that, because I think they’re very important for later, to fill out the curriculum and have lots of information, widen your horizons. I know I want to go on an exchange to another country or various countries.

In the short run, I want to graduate with honors, all 9s and 10s. In the long run, I want to be the national Secretary of Education.”

“I’m committed to my goal and I take the appropriate actions.” *These students go beyond just having goals; their behavior and actions reflect their commitment to their goals and their desire to achieve them and make them reality.*

“I am very committed to this goal. I love my major, and I’m committed to it.

If you really want something, you’re going to like doing it and you’ll do it well, even if it’s a struggle, because big things are not easy. If you really want it, then any effort makes sense, no? On the other hand, if you’re not committed, you’re not going to do well and you’ll always be thinking, “Why am I doing this? I don’t want to any more. It’s a bore.”

I'll tell you, I know what's next: I'm going to graduate. For the next four years, there's nothing else in my life, at least as far as I know. Just graduate on time. That's the only thing I think about. It's my main goal.

My daddy says if I graduate, I'll have more chances to fulfill myself and be happy—and I'm going to do it. Nobody will stop me.

Yes, I'm committed to my goals. That is, it's part of my personality, I'm a results person. The satisfaction I get comes from achieving my goals."

3. Relevant People

Generally, students strongly committed to studies say their parents are the most important people in their lives. They say they have been fundamental for their education—particularly in terms of values, habits, and personality—the support they give, and the motivation they provide for continual improvement. They are committed to them, to perform and to respond to them. Finally, they value the moment when they chose a major, since their parents supported them and gave them the freedom to make their own decisions.

"My family, especially my parents, are the most important in my life. I am who I am because of them." *The role of family and particularly parents is fundamental in the lives of successful students. They talk constantly about what their parents have given them.*

"Many people influence the way you are in school, but nobody more than your family. Your family is the most important to help you get ahead, not only in school but in every aspect of your life.

My mother is divorced, but that didn't keep her from raising us right and with love. She gave me my habits, and that sets me apart from some of my friends who have both parents. They don't have good habits, and they aren't good students.

My parents are critical to everything in my life, from the minute I get up to the minute I go to bed. They never force anything on me, but they steer me toward the best and they motivate me to get ahead. They always tell me a person should have integrity and give everything she's got if she wants to be happy and successful.

Why do I think I'm a successful student? Thanks! I believe it's my family. If you come from a family where they teach values and good habits, if they support you, then you want to study. You even enjoy it!

I also get a lot of support from my boyfriend."

"I can always count on my parents for support, help, trust, counsel, and encouragement." *Successful students say that the support they get from their parents in the form of trust, encouragement, counsel, help, and financial resources is critical to their personal development.*

"Thank God, my parents have supported me to the hilt in everything. They're always there when I need them. They support me in what I want to do, and they've always helped me make the right decisions. I have never felt alone. And they don't force things on me. They say, "Look, it's better to do this because of this and that." When I foul up, they support me and say, "Go ahead. Give it your best."

Well, I get a lot of support from my family, not that they're always after me but they say, "Come on, you can do it." In my case, I have six siblings, but I never felt like, "Where is my mama?" Instead I feel like the only daughter—and all the others feel the same.

Having your parents' support is wonderful. I used to talk with my daddy to see if I should change over to the new degree plan, and he said, "You have to decide, and whatever you decide, we'll back you up. It doesn't matter if it costs more or less."

I'm not from Monterrey, and when I told my parents I wanted to go away to study, they never said, "You can't go." Their reaction was, "Go ahead, study. We know you know we love you and are going to support you." Even though they're a long way away,

my parents have an important part to play because they trust me. I like having them trust me. That makes me feel secure and supported.

On the other hand, my father supports me, because he has had lots of experience, and I always go to him. I say, "Look, we did so and so in class," and he always knows all about it and has experience. He shows me the practical side of the idea."

"My parents expect a lot from me, and I feel very committed to them." *High expectations from parents and others are common among highly involved and committed students. They respond by performing successfully as students. They are also characteristically grateful to their parents and admire them.*

"My parents have expectations of me, they want me to be and do my best. Hey, that's heavy, ya hear?

When people expect things from you, you work harder, you know? To disappoint my parents or my girlfriend is not something I want to happen to me. Better try harder.

My feelings toward my parents are respect and admiration. I really admire my father, because he works hard. My mother too, because there are seven children and we all get her attention. I am really grateful to them for all they do for us and give us.

My main goals are to please my parents and to thank them for everything by earning a college degree.

Who has really affected me is my dad, because he has always been a successful businessman. He had a very high position and is always setting me an example. Further he gives me everything, things he never had. I think my gratitude for everything he has given me affects me positively. I feel very committed to him, and I want to show him I can win.

My father was sick in the hospital. I felt like for a moment he lost his sense of time and location. Then he looked at me and asked me, all wrapped up in his white hospital robe, what semester I was in. I said I was in sixth. He looked at me and said, all full of pride, "Then you'll be an engineer soon." That moment is always with me and motivates me to go on.

As for my parents, I think I have a great responsibility, because we're from Chiapas, and I know they're making a great effort for me to be here. My father is retired and lives

on a pension. Last semester, I tried really hard in school, and wore myself out. I thought, “I only need a GPA of 83 to keep my scholarship, so I’m not going to put so much pressure on myself. I could relax and enjoy things a little more.” But just when I was thinking that, my parents got a letter from UDEM, saying I was an outstanding student, that I had a GPA of 95. And my mama said about my dad—who is very dry and reserved, that his eyes filled with tears when he read the letter, and that he was super happy and proud of me, that he could hardly talk. So, change of plans! I am trying hard again. And you know something? Nothing is going to keep me from giving my dad, every semester, the pleasure of knowing that I’m responding to his trust, his support, and his love.”

“When I picked a major? My parents listened to me, supported me, informed me. But I picked it.” *Successful students point out with pride that they chose their major, but the information and time and moral support their parents provided was important.*

“Choosing a major was my decision, definitely. My parents’ role was to listen to me. They told me to talk with people, to visit schools. They said I could choose any major. If they didn’t know anything about one, because they didn’t study that, they found people for me to talk to who did.

My dad is a great lawyer, and all my brothers studied law. When I said I wanted to be an engineer, he wished me every success. And for months, I figured he would get mad!

I picked the major my dad wanted, “because if you major in the one you want, you’ll starve to death.” It was a mistake. After a year, I told him I’d just as soon starve to death happy, or be unhappy and starve to death anyway, because I was never going to be any good at his profession. And he answered, “Study what you want, and I’ll back you up. And you won’t starve to death if you enjoy it. Go ahead!””

4. Faculty

Successful students signal the faculty as the most important element of their university experience. They say “there’s a little bit of everything,” but generally their teachers are

good, and they want to work with the good teachers and be near them. The best teachers are honest, courteous, well prepared, know how to teach, have relevant experience, are enthusiastic, and establish solid, productive relations with students. Finally, they say some teachers should improve in some of those aspects.

“The faculty is the most important thing at school.” *Students identify faculty as the “institutional” element of greatest impact on their formation.*

“If I had to choose one thing about a school to be excellent, it would be the faculty. Nothing is more important! It’s very important for me to count on a well prepared faculty, and that’s why I choose a good school.

On that topic, who hires the UDEM faculty? That’s the most important job of all, more important than Azcúnaga’s [the president]!

Well, you come to a school for someone to guide you, who can say, “You’re right or you’re wrong.” Then really it’s the faculty who set the pace and decides how you’re doing, if you’re making progress or not. If not, I could just read and read, and I wouldn’t need a teacher.

I believe it’s my responsibility to try hard and graduate. I’m going to earn my degree, and nobody else. But I’m not alone in that. The teacher is there too, and we’re together. It’s a shared responsibility: mine is to be motivated and try; the teacher’s is to motivate me to what I like best, to infect me with his involvement.”

“I’ve had some very good teachers, some not so good. But I stick to the good ones!”

Unlike their parents, where the consensus was “They’re excellent,” students know there are faculty of varying quality. Generally, they find the faculty good, and they have a noted preference for the best.

“Generally, my teachers are good, and I’m happy with them. They’re here at a good university for a reason. But you find everything here at school, and I’ve had some where I say, “What the crap are they doing here?” But generally they’re very good.

At UDEM we have a good faculty with common sense and humanist values, who go beyond class and talk to you about values, about what we have to do beyond school. My major is law, and people put that down. So they teach us we can succeed and still be upright and honest without falling into illicit or improper conduct.

I’m happy with my major, because I’ve had good teachers. My teachers in psychology, I love them. They make the difference, see? But all the crap “general formation” courses I have to take, that’s what I don’t like.

I’m glad I have good teachers. I even have very good relations with some of them, like they’re more than teachers, they are mentors. I get mad when I get a bad teacher, because you learn less that semester, even if you make 10, because what you learn depends on the teacher, not on the grade.”

“The best teachers—put together, ready—know how to teach, are enthusiastic, and they connect with me.” *The characteristics of the best teacher are related to their academic preparation, knowledge and mastery of the discipline, teaching skills, experience or professional career, strictness, and personal qualities like punctuality, self-esteem, consistency, and interest in developing their students.*

“I think nothing is more important than a motivated teacher who obviously likes to teach and *teaches*. Students always know when a teacher likes to teach, when he knows what he’s teaching, when he’s interested in us. You can’t fake that!

What affects me most is the teacher’s interest in the class, how interested he or she is, how much he or she likes to teach. That’s immediately contagious.

I love faculty who give back homework and exams back right away, carefully reviewed. They write notes, they say, “You know, you need this, you need that.” Nothing disgusts me more than putting in a lot of effort on a paper, and it comes back with a little

check mark and a 10 on the cover. The teacher spent about one second on it! Or when just *a-a-a-a-all* the papers get a 10.

You notice how much the teacher is interested in your learning, or helps you or straightens you out when you're off track. If you've got a problem, good teachers are interested, they say, "I can help you at such and such a time," and when you go, you see they're genuinely interested in helping you. When things are like that, that's when you see you improve.

Last semester I had a teacher who made me give it my all. I complained one day that he expected more from me than from the rest, and he said, "That's because you have more to give, and I mean to see you go as far as you can." Now I go see him all the time, and he always motivates me to do my best.

It's very important to me to establish a strong relationship with my teachers. I don't want to be just one more. My dealings with my teachers make me feel more dedicated to my studies. Naturally!

A factor which influenced my decision about where to study was the faculty, because I was torn between UDEM and the Tech. I went to a Tech prep school, and I knew that system. The UDEM system is far more open, not easier, but more relaxed. You have a lot more contact with the faculty, they are more open. At the Tech they are super closed, you can't talk with them. They come to class, they lecture, and they're outta there. Here it's more like everybody is in it together. At UDEM, you have a more personal relationship with teachers.

What do I see in the good teachers? They go beyond teaching, they are interested in the person. They come on time and don't miss. They know my name. They remember my likes, my interests. They're fair. They're respectful. They know how to teach, to keep students' interest—my microeconomics teacher, the way she explained things left me with my mouth hanging open, she kept you awake for the whole class! They dress well, they look the part. They've studied in great universities. Some are UDEM alumni. They're successful professionals, and they're still teaching. They don't just look at your grades but whether or not you learned something. They're up to date. They follow the syllabus. They do the teaching—some lay it all off on students. They keep the class disciplined and orderly.

There was one teacher, economics class, and I was lucky to get her, because beside being a good teacher and knowing a lot, she was accessible and a very good person. I had another teacher, in psychoanalytical theory which is a very difficult course, who most people flunked, but he is a very good teacher. He knows how to teach, he likes the field, he gets along with the students, and all the students pay attention and study. Even though not everybody gets a good grade, even if they've flunked the last two six-weeks, they still enjoy it. I think he's the most popular psychology teacher."

"Some faculty should improve." *Students say some faculty do not meet their expectations in terms of the good characteristics above.*

"Some teachers seem to be there against their will. Once a teacher told us, "They gave me this class, but I don't like to teach it." That really tells you something.

Just now I had a teacher whose field is neat, but she doesn't seem to like it. You don't pay her any attention, because she'll be talking and all at once go off the subject, or she doesn't know the material and never meets the goal. It's embarrassing when they don't know how or what to teach.

But lots of teachers are very cold. They just come in and stand up in the classroom and do the class. They don't give the student anything more. Some teachers just teach to get it over with, they don't enjoy it. They act like they're doing you a favor.

For example my teacher —. I mean, I passed and passed very well, but it was all self study. He had lots of degrees, a doctorate and everything, but he didn't have the least spark as a teacher.

I've noticed that some teachers have no judgment Sometimes they discriminate against a certain group or they have their favorites. The problem is, they do it right up front, and people know it."

5. Fellow Students

According to successful students, classmates play an important part in their university experience. That importance lies in their work in teams, mutual support in personal and

academic matters, mutual encouragement, and companionship and friendship—though they say their friends do too significantly influence their principles, habits, or goals. Successful students surround themselves with others like themselves, with similar interests, habits, and aspirations. They criticize the apathy and lack of interest and enthusiasm of the many students unlike them and do not associate much with them.

“My fellow students are important [in my student life], and just like at the store, you find a little of everything!” *Successful students realize that their fellow students are an important ingredient of their academic experience. They do not say their fellow students influence their way of life or their hopes and goals, but they are important in terms of team work and team study, as well as companions and friends. They say their close friends are generally good students, while they criticize certain aspects in other students, such as apathy, indifference, and academic dishonesty.*

“Fellow students are a big influence, although their influence depends on you. I, for example, let my friends influence me positively. I take from them what suits me, what they’re offering that’s good. They help me get ahead, like in team projects. I couldn’t do a lot of things by myself, so the team is a tool that helps you move lots of things along and offers you support and companionship if you’re alone at the university and don’t feel quite right. I surround myself with lots of people, and that way you feel okay. At times you feel like you come to school just to study and then you don’t get much good out of it. Then you figure out that part of the essence of our university is its people who are with you, their company, the good times together, the enthusiasm you catch from them.

As far as fellow students, go, I’ve had a little of everything. I’ve had good, excellent friends, but generally they don’t try very hard and they like to distract other students or the teachers.

Well, personally I've seen a little of everything, but I what affects me most is not knowing your classmates and then having to work with them and having problems. But I think once you get to know them, you decide who to work with and you know who works and who doesn't. But it affects you: some want to do things, others don't, or you want to do something and somebody else wants something else. There's a lot of difference in the kind of effort they make.

Some are super irresponsible and other are super good. I've had good luck with some, those who try to do the work, but not with others. In general there are lots of irresponsible students, I think. Probably about half and half [responsible and irresponsible], but I try to get on teams with the ones who like to work.

My fellow students try, some yes, others no. There's always the leech or the mosquito who tries to take advantage of the rest, when you're doing an assignment, they don't do anything, then at the last minute they come up and feed you a line so you'll help them."

"The fellow students who I study with—some of them are my friends, are generally good students. You know how it goes. 'God makes them and they get together'."

Successful students tend to get together with others like them. The constant of teamwork obliges them to find others with similar interests, habits, and aspirations.

"I'm comfortable with my fellow students, I'm telling you, mostly I try not to choose but just to deal with everybody here, and when somebody shares my ideas and tastes, well, then we work together and become friends.

I think it's great that up to now, the friends I've had, I have nothing to complain about. Teamwork is great, it's been really good, and we do a lot of teamwork. They assign group projects in every class, and most of the time we understand each other and get along well.

Among others in my major there's a high level of interaction. Yes, there's competition, lots of people trying to stand out and be better and better.

My relations with the others in my major are generally very good. First I was going to go to the Tech, because most of my friends from Veracruz are there, but I came to

UDEM and I liked it. I enrolled and people said, “People from Monterrey are very closed, you’ll see.” Well, no, on the contrary, from the beginning I started running around more with Monterrey kids than with the kids from out of town, but in general I’m part of a very neat, united class.”

“But there are a lot of apathetic, bored students.” *Generally, when they describe their fellow students, successful students complain and say most students today are apathetic, bored, and not very enthusiastic.*

“I’ve got friends now who don’t want even to stay in the major, and when they have to work hard, they say, “Gee, why do this if I’m about to drop out, I don’t want to do this any more” or “Wow, I don’t want to take this course, it’s not going to do me any good” and they don’t try. Then yes, your fellow students’ attitude affects you, maybe to do things right, but it’s not something you can avoid, because if you know who you’re going to get together with and work or if you can manage the situation, then there’s no problem.

The problem is there’s almost always somebody who makes trouble in the class . . . well, most classes. There are other classes where everybody pays attention, but there are some where people suddenly get the teacher off track. I don’t like that.

Well, in my major, everybody’s very divided. On one hand are the super snobby little rich girls from here in Monterey, who are here just finding something to do until they get married, and those of us who want to study and develop ourselves professionally.

I started out really motivated to be in student government in those first days, and I wanted to meet all our objectives. One of the first things we did was to help the faculty organize an Education Congress, but the sad thing was, almost nobody participated. We had to come way down on the price to get people to come. We needed support here in Monterrey, because lots of people came from other countries. It was international. And only thirty girls [from UDEM] came, even though they suspended classes in the whole major where we have about two hundred students, and we came down from \$1,700 to \$500 pesos.

I think there’s a lot of apathy among my friends. When we had a forum in our major, a lot of them [girls] preferred to go somewhere else, not to the event, or they thought “It’s a

long time before I graduate, so I'm not interested in this kind of things" and they stayed home and slept late or went out to the country, because it lasted three days. There were very few people. I think a lot of people are not really interested in the major or they just don't make an extra effort.

The business of giving studies your all, that's a problem. There are some in my major, ten or twenty, who carry the entire load, and there are a bunch of very mediocre people who are not interested, I don't know, around forty. In class and in activities, you see about 20% of the students making an effort, who want to excel, and about 80% who just go with the flow. And sure, some are really bad students! Students who drop classes or pull out cheat sheets, write on their desks, or pull out the nextel and fool around.

There's a good bit of intellectual dishonesty among my friends, and I've seen people reducing cheat sheets at the copy machines. The teachers know about it, but they can't do much about it.

My friends in class distract me. They say, "You've never blown off a class, let's go eat." Even so, I think they are good students on average.

I think the level of strictness of my major is very normal, but how my friends take on about it! For example, I've just been studying for an exam in a course I think is simple, not much to think about, just understand the stuff, and my friends—oh, they're stressed, they're going nuts, they say it's really tough and everybody says so, but I think it's pretty normal. Maybe it's hard for my friends because they don't try. They don't pay attention, they miss class, and when the teacher asks us to do exercises in the workbook, I do them but they don't. Since I never miss class and take good notes, I almost never have to study for exams."

6. Academic Aspects

Successful students want a meaningful university experience and say they usually like their major for its design, timeliness, relevance, affinity, social impact, and instructors. They are proud of the institution where they study and say it is ideal for them. They express the desire to improve some elements of their academic experience, such as some

faculty, huge classes, selection of electives, and laboratories. They have very diverse opinions about the rigor of their major: some say it's high or about right, others that it's low. Opinions are more uniform when analyzed by major.

“To have a complete academic experience is very important for me.” *More than just passing a collection of courses, students are conscious that they came for a much fuller university experience, though they recognize that academics are central.*

“I didn’t come to the university just to get a degree. I came to be educated, to grow, to exercise, to learn music, to find a mate, friends, colleagues, mentors, and clients. I came to prepare myself to help make a better México.

I’ll tell you that before you pick a major, a lot of people say, “Check out the program if you’ve got doubts” or they say, “Tech has a better program or UDEM has a better program” when in reality you don’t know what’s better because all you’re seeing is names of courses but you don’t know anything about what’s in them. It’s important to get lots of advice about which school and which major. I think the courses should offer you academic growth, they ought to have that little element, that the course helps you develop in various aspects, not just pure theory but what you can apply. I really like the classes at UDEM. The teachers show us more than the course content, like interpersonal relations, study habits, public speaking, team work, see?”

“I really like my major. Hey, a major is like a girlfriend. You’d better really like her, because you’re with her all the time.” *Committed and involved students show high levels of satisfaction and interest in the degree program they’re studying and their academic experience in general. They appreciate good curriculum design, relevant and updated content, good course sequencing, and faculty who work together. One of the things that helps them decide about which institution is the curriculum.*

“I like my major. I think it’s up to date. I like the courses, and I think they’ll help me in the future, no matter where I work.

I really like my major. I like the degree plan. Just now they brought out a new version and asked us to look it over and decide if we wanted to change, and I didn’t like it. It’s really focused on labor psychology, and the old plan, the one I’m in, has all areas of psychology. That’s what I was looking for when I enrolled, because I went to a Tech prep school, so it would have been easier to go to the Tech and study psychology. But there it’s all organizational psychology, and that’s not what I wanted. I think my degree plan is excellent. The plan is the key.

My degree as such is well designed, it’s relevant. Up to now, everything’s okay. The only class that shouldn’t be there, even the teacher said, “I don’t know why they put this in here,” is statistics. Other than that, all the courses I’ve had were good, related to what I’m studying in other courses. I like it when the courses are connected, when they deal with contemporary things, but above all when the teachers know each other and work as a team, see? I’m glad when they don’t think “I’m going to teach you this course” but “Together we’ll make a great engineer out of you.”

Well, for me in fact the major is what got my attention, is what made me come to study here at UDEM. I liked the degree plan. I checked it out when I was in prep school, and I liked the courses and everything looked great and interesting. Now that I’m studying, it’s true, and the teachers do a good job. They give us lots of contemporary examples, and that’s what I like best. Hey, a major is like a girlfriend. You’d better like her a lot, because you’re with her all the time.

For my academic experience I think congresses and academic events are important. In class you see interesting things and understand them, but you don’t seem them applied. But when the speakers come, then you say, “Ah, that’s how to apply this technique or that system,” which really helps you understand.

The best of my major so far has been psychoanalytic theory. That course made me look at my studies differently. It’s great to take a course that all at once makes you think you’re on the right track.

I love my major, marketing! I’m happy with my choice. Of the 18 courses I’ve taken so far, I liked marketing and market research best. They’re key courses in my

major—and also microeconomics because of the teacher; and calculus, because I love numbers.”

“I’m proud and happy to be at UDEM. This is the ideal school for me.” *There is a high degree of compatibility between successful students and the institution. They feel they’re in the right place in terms of factors as diverse as faculty, friends, academic programs, and recognition.*

“I love the ambience at UDEM. It’s like a family. I think UDEM is a great institution, and I’m proud to be here. I think something determines how you’ll do in the future and that’s school. I think being here will help me a lot. I think I came to the right school. State [the state university], the Tech, UR [Universidad Regiomontana], they’re all good, but which is best for me? This is the ideal school for me!

I’ll tell you, I’m 100% sure about my decision [to come to UDEM]. I’ve never regretted it, and above all you see yourself getting better day by day and you’re ahead of where you were in prep school. I see the problems others are having, but I’m telling you, a lot of my friends from high school are at the Tech, and I tell them they blew it. They should have come here. Here it’s easier and the faculty deals with you more, they help you more, they give you a chance for advisement, they help you with your questions, not like there where they say, “You look it up in the book, find it yourself or ask somebody else.” Not here. The attitude of a teacher who wants to help is evident, he’s not just doing his job, getting here and teaching, but he becomes your teacher, your coach.

Know what I like about UDEM? The faculty. They’re like when I was learning karate as a kid, the instructor was everything: your idol, your teacher, your friend, your counselor. A lot of the faculty at UDEM are like that: they don’t just teach a class, they do a lot more. They know me, and I know them. We’re in it together.

As far as recognition of student effort, this semester they did something I thought was really good. Before they didn’t recognize scholarship students, but this semester they gave us some recognition, and I think that’s good. You say to yourself, ‘Well, good, what I’m doing is worth the trouble’.”

“Some things about the curriculum should improve.” *Students detect various problems related to faculty, staff, curriculum, and teaching methods and practices.*

“I don’t like the difference between the teachers. Some are excellent, many good ones, but some bad ones. How hard would it be to get rid of the bad ones? They give you a very bad experience.

Big classes. Ugh! What a waste. It’s like going to Mass, lots of generalized bull, everybody in his own little world, and the teacher unable to control the class.

I think the program director is not very good. She’s not interested in doing anything for us. I don’t know if it’s wrong to compare her with other directors I know or have heard about, but if you look for them and they’re not there, they’ll get back in touch and give you an appointment. With mine, you have to go back again and again, because she’s never going to look for you.

I think the 1996 degree plan was better, because now they took out the elective courses and you can’t choose what you like. I liked it the other way.

The law degree . . . I think they need activities outside the classroom, congresses and conferences, I don’t know. Last year we didn’t have a single student activity. The student government did nothing.

In my major there’s a course in work measurement and analysis, and I’d never done any of that, using a watch to time operations. My cousin at the state university was just by chance taking the same course the same semester, and she told me, “You know, I learned a lot in our T&M lab. They took us to nine different plants, and we measured the time of various operations and did a project on it.” I thought she was lying, but it was true! And I thought, “Crap, all the money and the prestige we’re supposed to have or do have, but really we’re way behind on activities and facilities.”

“I think the academic rigor is about right . . . or a lot.” *Successful students often speak of great academic rigor, especially in terms of time and effort.*

“Exam periods are often really full of pressure. About a week before you start thinking, “Here come the exams!” You get very tense and nervous.

The rigor in my major is marginal right now; I've still got a chance to balance my life. I'm in third semester and I can balance my time, although sometimes you feel like you don't have any time, that you're a little loaded up, but it's just a question of getting organized. Sometimes exams come at the same time as term papers, and since they're team work, some of us have different schedules. That's when you get into trouble a little. You have to say, "Look, we've got to get together and get to work, because otherwise we're not going to get it done."

I've seen a high level of rigor in my major. You have to adapt from prep school to college, and now they give you a lot more homework, things that require more. For example, they may ask your opinion about the news or some fact, and that means reading and understanding, giving your focus. The projects are multi-level.

Law is a tough major. It requires more time and dedication to class. I think it's a hard major. But hard in the sense that if you want to study, you'll do all right, but there's always the guy who runs in and copies or has a cheat sheet and gets away with it. I've seen it in my own class. But it's hard, because I'm taking sophomore courses, and there are rising seniors in there taking it again. A lot of people flunk."

"My major is easy. I used to think I'd have to work harder." *Other successful students say the rigor is moderate or low with not much to do outside the classroom. When they compare themselves to less successful students who say the major is hard, they say study habits make the difference.*

"I don't spend much time studying or doing papers or activities. I mean, I do them, but my sister says, "I never see you studying. You never bring work home. How do you do it?" Still I get good grades. I think it's because I pay attention in class. When I get there and there's something I have to do, I do it right after lunch, very fast, in about 15 minutes, and then I don't have anything else to do. I think that if you don't pay attention and don't understand the idea, then when you go home and try to do the project and don't understand it, then you take longer, because then you have to understand it. But for me it's enough just to pay attention in class.

I think the level of strictness of my major is very normal, but how my friends take on about it! For example, I've just been studying for an exam in a course I think is simple, not much to think about, just understand the stuff, and my friends—oh, they're stressed, they're going nuts, they say it's really tough and everybody says so, but I think it's pretty normal. Maybe it's hard for my friends [*girls*] because they don't try. They don't pay attention, they miss class, and when the teacher asks us to do exercises in the workbook, I do them but they don't. Since I never miss class and take good notes, I almost never have to study for exams.

As for how hard the major is, lots say, "I didn't sleep, I studied all night." That never happens to me. Even if I wanted to stay up, I couldn't, because I get sleepy and get a headache. And I get good grades. The only thing I don't like, maybe it's just me or whatever, is when the university lets in a lot people who couldn't get into the Tech and they come here and they let them in. That really makes me mad. They are bad students! They were at the Tech, but they flunked out and they say, "Well, I couldn't make it here so I'm going to UDEM. It's super lite, so I'll be okay." That makes me mad. Sometimes I regret coming to UDEM because of that, because lots of people think it's a lot easier here than there.

When I think about how hard the major is, I don't know what to say. Like, a lot of my friends say, "No bull, I didn't sleep all night" and that doesn't happen to me, maybe because I'm doing better than they are or because I always turn work in on time and don't have to worry about quizzes. But lots of them say they're the walking dead, and I ask them how and why they do that. That business about staying up all night, it's never happened to me, never, never, never.

As for homework or group projects, I don't know, but in law there's nothing. We hardly have homework. Usually in all the courses I've taken up to now, only in labor law we had homework, where the papers are 40% of the grade. In the rest they very rarely gave us homework or team projects. Still I put in a lot of time on studying because you have to study for every course. Even if you don't have homework, they still ask you questions, and the homework is to explain things."

7. Extracurricular Activities, Scholarships

Successful students are conscious of the many benefits of participating in extracurricular activities. For those and other reasons, they take part in a considerable number of such activities, such as personal development, soccer, and student leadership. They say the institution offers a great quantity of choices for holistic development and that those activities are high level. Students who work in campus say the experience has let them mature and feel more committed to and involved with the institution and their university experience.

“Extracurricular activities help you in the future . . . and they’re fun!” *Developing skills, widening learning, and a well-rounded formation all come with extracurricular activities, as well as providing a source of distraction and amusement.*

“Extracurricular activities are really important. They get you ready for the future. I go to all of them and participate in whatever develops my whole person.

What sense would school make if you just went to class? There’s lots more, and that’s what makes the university neat. Dance groups, literature, religious groups, exchange trips, student government . . .

When I enrolled at UDEM, I went to the Gente UDEM [UDEM People] party, and it was really neat. I wanted to get to know my new classmates, and now my friends are the ones I met there, the ones I get together with.

An extracurricular activity changed me forever. In prep school, a teacher said, “Let’s see, who wants to be the class rep?” She and my friends really encouraged me. So I became the representative, and I changed a lot. Now I’m more confident, more capable, more ambitious, more a leader. I’m eternally grateful to that teacher at UDEM prep for that little moment which changed me so much.

I’ve had good experience with extracurricular courses. I took literature the first semester, a workshop where we read and created. Last semester I took a course on how to

become a person, a class where we talked about character, about the environment, how it affects you, how you include values in your life, what level of humanity you have. I think the good thing about cocurricular courses is that they help you grow as a person. There's more to life than your field of study. It's neat to talk with someone with broad horizons, no?

Extracurricular activities help you a lot. They're a plus which complement your major. I think it's better to know a little about a lot than a lot about just one. You know about lots of things, not just yourself and your major. And they're fun! You have a good time with your friends. I like them."

"I'm into everything . . ." *Highly committed and involved students report high extracurricular activity, participating in student groups, sports, cultural and artistic activities, study trips, pastoral work, general education courses, and leadership activities.*

"I've always gotten into all kinds of activities. I don't have time for everything, but I've always been in sports and student government, the school newspaper, special groups. I took Mexican Literature.

This semester I'm in a psychology group. It's called *Educa*, and it's kept me busy all the time this semester. It's a UDEM group, my friend is president, and another friend is vice president. I'm a collaborator.

I went to a congress and to various lectures, three or four. I like extracurricular activities, and here at UDEM I've taken things like manual arts, water color, oil painting. I've always had some manual arts course.

I've taken four cocurricular courses. The first was contemporary sculpture because I like to create things, so contemporary sculpture enchanted me. The second semester I took *dating and sexuality*, and I thought, "They're nuts! How can such a course be?" But in fact the course was really neat. They tell you things you had no idea about, how to behave, what makes a healthy and complete relationship. This semester I'm taking yoga, and it's neat.

Right now I'm taking the movie production course, and I really like it. We're working on the term project. I did a short feature, and it's neat how that complements my major.

Although I'm a sophomore, I started organizing a student government group already for the day when we have it to do. And know what? Who would have thought it? Now I'm secretary of the student government, and it's been a great experience. I want to do lots of things and make changes, lots of new things for the education major to get rid of the "MRS degree" nickname, since lots of education majors are after MRS degrees. Being in leadership groups is tough, because when you organize an event, there's tremendous apathy. Lots of girls don't take part out of pure laziness or they come to classes but have their social courses or go to the gym or stuff like that. They're not interested. They come to class and nothing else.

We're getting together a student government group this semester to get ready for the class next semester. We've turned in the program and the work plan, and we're getting there. I think I'll be secretary or treasurer. We're going to share some of the jobs.

I love sports here. The good thing is, you can do them all—soccer, basketball, mountain climbing, track. Just wish I had more time, lots more, to do all the sports I want to.

I like lots of things outside class, mainly mountain climbing, rock climbing. Mountain climbing is one of my great motivators, right after my family, and thanks to UDEM I'm in a mountain climbing project. We're going to Ecuador in December, and I'm really, really happy about that. The class fascinates me."

"UDEM offers lots of optional activities outside the class. I'm having a great time here!" *The institution offers a great variety of extracurricular activities, and students pay attention to that, signaling the great diversity of choices and the very fact that the institution makes them available.*

"That [extracurricular activities] attracted me to UDEM. There are lots of options. I remember when I saw the list of course and activities, it was immense, and I thought,

“What’s this? There’s a ton of things to do here!” It’s easy to make promises, but UDEM delivers on everything. All the choices fascinate me.

With all those things [cocurricular activities] I have really gotten identified with UDEM. The told me, “You really get involved at UDEM,” and taking part in all those activities has really helped me a lot.

I like how easy it is to start an organization at UDEM. They give you lots of support. For example, some of my friends are going to start a philosophy association. There’s lots of opportunities in that regard.

My work-study job, it’s great. I’m with _____. He’s super friendly, and that’s good because it’s really focused on my major. I review contracts and all that. It’s like being in an office. I’ve learned a lot, and I’m very happy. No complaints.

Right now I’m in the student society, and we went to México City at the end of October, to the Senate and House and Supreme Court. It was great. Activities like that open your eyes and get you more committed. And you have a lot of fun.”

8. Services and Infrastructure

Successful students say the services and infrastructures are not critical factors for better or for worse in their university experience, but they are important. Generally they find them good, though most point out needs for improvements: in the library, a better collection and better study areas, since they spend a lot of time there; in computer labs, more terminals and peripherals; in student services, bursar, registrar, better service; in parking, more space, lower cost, and better flow. The improvements they seek generally are to save time and improve study conditions.

“My experience with services and infrastructure? Hang onto your hat! No, just kidding.” *In general, successful students say that services and infrastructure are part of the university experience, but not the most important.*

“The facilities, they don’t affect me much. That is, I don’t think they’re as important as your major professors or your major, and I think they’re good. The heat? I don’t sweat much, so when it’s hot, I don’t suffer. If it’s cold, I wear a jacket.

I like the facilities. I’m really glad the campus has some gardens, such as the one where the potatoes sculpture is located. I think the rooms and so on are big, though sometimes crowded. I mean, you’re in contact with lots of people, you know lots of people, the same whether you know them or not. You don’t feel as weird as you do at the Tech. I like that here, like we’re all a family, a community, whatever. It’s big but I like that.

The infrastructure aspect, facilities, rooms, I think they’re good, and not having AC doesn’t bother me. I like it all open, the breeze in the patio, the green spaces. I like UDEM’s campus. I like to come here and spend lots of time. The lawns are big, there are lots of places to spend a little time, it’s all clean, it’s peaceful, isolated from the city which is a hassle.

I think it’s all pretty precarious. For what the university charges, we ought to get a lot more. On the other hand, I know it’s not growing much and all that.”

“The library is OK, but they should have many more books.” *Successful students say they visit the library frequently, on their own initiative or for academic reasons, and they’d like a better collection.*

“Look, the library is neat, except there’s not much in the area of literature. I like to read, and I come and start looking for books, and there are only two stacks. I wish the collection were bigger.

During the semester, the library is not really necessary, or like it’s necessary but more during final exams. They close it from midnight until six in the morning, and there are times I need to be there longer. I think that’s bad. The library should be open any time we need it.

The library is the only *but* at UDEM for me, because there’s not many books on psychology. That’s where I look, and there’s not much to choose from. Usually, to do

papers, we end up going to the state university library or sometimes to the Tech. There we find lots more books than here.

I use the library a lot, and there's a lot to be desired. In labor [law] there are only about eight books, really old ones. I'm telling you, we had to go to the state university, and we were impressed with the library there. They've got lots of good books. My hat's off.

Some teachers ask you to go to the library, others no. Usually not many, I think.

I go to the library a lot. That's where I am most after classes. Some teachers ask us to go, but I go because I like it. Usually I like to use it to read books and magazines. The bad thing about the library is the collection of videos is not very big, and lots of times I go for a certain book and they don't have it. I've had it happen that the system says the book is in, but you go and it's not in, and then what can you do?"

“SISC must improve, now.” *The general opinion of successful students is that the Student Information and Attention Center should improve the service it offers.*

“Well if anything needs improvement, it's the SISC. I don't know if they train them or not, but I don't know what was wrong with the SOFES system at the first of the semester. The page wouldn't come up. After I filled out the application, I couldn't print it. I called and sent mails and they never answered, never. Then I called and they say, “Wait, let me talk to so and so, no, that's not my job” and finally I had to talk to somebody in COES, the place where they help students with problems, where I took the induction course, so she could look at it, and she worked it out! In the SISC, some people are nice and others treat you really bad. The inconsistency should not happen. I don't like long lines and being run around the barn for a signature and having to get back in line again.”

“Computer Laboratories are always full.” *Successful students use the computer labs a lot and very often; they value the service and say the main area for improvement is the number of available terminals.*

“The computers are always full. I don't think there are many. What I mean is that if you want a computer it's hard to find one. I wish they had more.

As for the computers, it always seems to me there are not many. For example, now that exams are on top of us, there's no way to get one, and that's a problem for me, because I have to go home and come back. That way I lose time and money.

What bothers me are the computers, the availability of computers. If you're pressed for time and you've got to get something done or you have to print something or send an e-mail to a teacher, there are almost never computers, and you spend twenty minutes waiting for one. The technology is dated."

"Parking lots. . . Have you heard something about that? It's fatal." *Students speak negatively about parking, saying it is insufficient, expensive, and low quality (in some areas). It means lost time, additional expense, and personal irritation, which they take to class with them.*

"Parking is a problem. Although I live close, I have to come a half hour early, because there's no place to park. If you come really early, there's room, but if you get here late, there's nothing, and you have to pay.

I wish there were more open parking lots. Well, maybe not more lots, but I wish there were more spaces because there are not enough. I use the pay places as a last option, because they're high.

I don't want to blame parking, because if you're a good student you have to get over whatever, but I'm somebody who uses the parking a lot and it hurts me, because sometimes I can't find a place or if you're in a hurry and have to go home, it takes half an hour to get out and another half hour to find a place when you come back. Or you have to pay fifteen pesos a day, which is plenty, as much as you spend on lunch. Parking has bothered me a lot, and I'm telling you, this semester I've been using the paid spaces because in the other lots my car got hit and scratched. Above all you lose lots of time and get irritated. Incredible, no? It's more stressful than exams!

Hey, I want to say something about parking. Have you heard something about that? I imagine you've heard a lot. It's fatal."

“Oh! One last thing on services and infrastructure.” *Other opinions have to do with the need for more space for individual and group study, better laboratories, leisure space, and cafeteria space.*

“There are not many study areas for students. If you’ve got exams and want to stick around and study, you go to the library and there are no cubes, and you end up sitting out on the grass. I wish there were more study cubes, quiet and everything. See? It’s important for the student to be able to develop, or like you ask students to study a lot, to work with their friends, well, give them the tools! I think that would improve things here.

I’m here all day. The fact is I can study only where it’s cool and quiet. It’s hard to find that, so some of us go up to the graduate classrooms. In comes security and runs us out. He leaves and we go back, then he comes back and runs us out again, and that goes on all day every day.

The facilities have got to improve. We need lots more engineering labs so we can apply what we learn in class.

I was national Judo champion, but I can’t practice here because the gyms are so far from where I live. UDEM’s team works out in the gyms at the Tech and the state university, and I don’t have a car so I don’t have the luxury of using lots of time moving myself around.

Students need room to spread out a little. I think that’s essential. You can’t walk on the passageways. . . And the cafeteria is always crammed at lunch. . . I’m from out of town, and I like the cafeteria, but I have no basis of comparison. My friends say the meals are really high, but I like the Mesa Rica special.

I think the class schedules here are bad, the scheduling system. They give you a date, and you have to be there, even if you don’t know what courses to take or what teachers. Sometimes they don’t orient you, and you think, “Okay, I’ll take this and that,” and when you get here the section is closed and you end up taking courses you don’t want.

What they did about work study students was bad, because before they were much more flexible. Now you have to report to your boss *and* to the scholarship talent administrators, and that takes more time, more to mess with. I don’t see any improvement there.”

Senior perceptions of the factors that affect engagement

1. Personal Aspects

Successful students have a series of intrinsically personal qualities and attributes which influence their level of commitment to study positively. Among them are high self-esteem, desire to improve, positive attitude, ambition, high energy, affinity for their major, excellent personal organization, responsibility, and discipline. Their behavior reflect their commitment to study: they take part, they do their work, and they have good relations with teachers and friends. They have clear, ambitious goals which guide their actions and inspire them to give more. Although they overcome personal difficulties, they generally have a stable personal situation—health, finances, emotions.

“Listen, you have to think positively, you have to be seeking your personal best, you have to like what you’re doing, okay?” *Successful students have very particular attitudes and qualities: high motivation, desire for improvement, ambition, and the quest for excellence; positive attitude, high energy levels, delight in the discipline they study and for learning in general; high self-esteem.*

“Look, it all has to do with being motivated to earn a degree, to belong to a university, and that leads you to set goals, work hard, take part in other activities, not only academics. Because I sure believe nobody can motivate you; you have to motivate yourself because you want something. I’ve always been that way. I think it’s the first thing you need, because you can see lots of kids don’t care, they’re not motivated. They’re not dreaming; they’re asleep!

I always look for more, better, a longing to improve. When I graduated prep school, I was headed straight for the state university. I wanted to come to UDEM, but I couldn't afford it. My folks said, "It's a lot of hassle; there's no money; better not." But I knew I'd be better off here, and I saw that lots of people were getting scholarships, and I had good grades. I convinced my parents to support me, and I got two scholarships! I'm using the one called the Leadership Scholarship. Believe me, doing that was really a big satisfaction.

I'll never be very organized, but I always take care of things. An 8 is mediocrity; I always shoot for a 10.

I think the attitude you have toward your degree and the day is important. Personally my attitude is, "I started this degree. I'm going to get involved, I'm going to use everything, I'm going to do okay."

I feel full of energy. My daddy doesn't like the way I use my time. He says I study very little and spend too much time in extracurricular activities, that I don't always sleep enough, and I'm at home only to eat breakfast and supper and sleep. And I tell him, "Oh, Daddy, you're the only one worrying. I'm up to that and then some!"

Well, first, I'm really interested in what I'm studying. My major fascinates me, so I'm motivated. Of course there are some courses that don't excite me, but I still try, because life changes. I've always like to study, always, although in this generation I may sound weird. But I've always loved to read, learn, know, everything.

Well, I don't want to be stuck up, but I think I'm pretty good. I'm always hearing applause, "Super good, what a great project," "We want you to lead." I do well in everything I take part in. It would be stupid to deny it. It's something I have to take advantage of, for my own good and for others'."

"To do all this, what I've done is be very organized and disciplined." *Some habits and skills which characterize successful students are personal organization, discipline, the capacity to manage activities and time, and personal responsibility.*

"To do all this, what I've done is be very organized and disciplined. I'm always focused on short term goals, and I try to reach them always to the max and not leave them half finished. I always finish what I start.

For me, responsibility is the most important, and I apply that to punctuality, always going to class, studying when I have to, asking questions when I should.

I'm a very organized person. I like to do things on time. I keep everything scheduled, e-e-e-e-very thing noted down, and I try not to miss anything. I don't skip homework or papers. You have to realize that school comes first. I don't go out during the week. I'm very dedicated to school."

"What would my teachers say about me? That I'm a good student! I get there early, I do what I should, I take part, I get along with them." *Successful students exhibit positive behavior in class and academic activities, as well as solid and productive relations with their teachers.*

"I always say what I think. If something upsets me or I don't understand, well, I say so. I'm taking part and asking questions. I don't like to be in doubt. I'm not one of those who say, "Oh, how could I do it? I'm ashamed to ask questions." No, I always raise my hand.

They'd say I'm a good boy in class. Know why? I get there early, I say hello, I don't talk, I pay attention, I take notes, I participate, and I say good-bye. And I keep up with all the work.

My teachers would say I'm an interested student, concerned rather, interested in learning, in absorbing a lot of information. That I'm always paying attention. They'd say I'm responsible, that I'm always looking for a challenge, that I have high expectations.

I try to be sure all my teachers know me, so if somebody asks who I am, they know who. I always say hello, I get along with everybody, I chat with them a lot, like, I spend time with them, and if I have a question, I ask them. I don't treat any teacher like a buddy, which is very common here. I send them e-mail, I call them, I ask advice, and congratulate them on Teachers' Day. But I always remember my place. I am a student. Like respect, you know. I'd say that with about ninety percent of my teachers I've got good relations, at least, I think, closer than the average student and teacher."

“It’s a question of getting better and better, yes. But to tell the truth, I’ve been like that ever since I was a little girl.” *Generally, successful students say they got the habits and attitudes that distinguish them in the family, and later in their first years in school. Some mention meaningful experiences in prep school or college, although more related to skills (leadership, preferences) than to habits or attitudes.*

“My family inculcated the values, habits, and attitudes I have, and they are important in my academic performance. They are what’s helped me improve ever since I was a child, achieve my goals. I have the advantage that nobody in my house has ever tried to pressure me, but I’ve always sought to be and do the best.

As for my personality, who I am, how I behave, well I’m the product of everything that’s happened since the beginning, how I spent the first school years, my family life, and I think my family has been the base of all my development because there they gave me the bases and values when have helped me get ahead.

Since grade school, junior high, and high school, I’ve always been super responsible, not only studying, but I pay attention in class, I take notes for exams, and I study. Nobody has to make me. That’s the way I am. That’s what I guess they’ve drilled into me since I was a little girl, and that’s the way I am.

When I was a little boy, I used to go fishing with my dad. Lots of times we went by ourselves. He told me over and over I would have to work hard, be decent, make friends, and meet my responsibilities. Now I know that he was not just talking, but he was teaching by example. I think those conversations made me the way I am, just like I was play dough. A while ago he told me, “Don’t work so hard, don’t stay up so much,” and I nearly threw a book at him. He made me that way! Dude, I felt like Frankenstein!

His name was Fausto, my teacher Fausto. He was an absolute votary! He didn’t give up until you paid attention in class. Very strict and hard, but he did it. It’s like a tattoo. It’s always there.”

“Look, I know very well what I’m aiming at and what I want from life.” *Successful students have well defined, ambitious goals that justify their efforts and sacrifices. They*

also see various situations—like having a scholarship—positively, as reinforcing their attitudes and behaviors.

“Well, I take everything one step at a time, I always plan what’s next . . . finish the semester right . . . go on an exchange . . . work until I graduate . . . earn a degree with good grades . . . get a good job . . . get married, start a family, have children . . . go to another country to learn other experiences . . . and now I’m thinking about what graduate degree I want, I’m already in touch with universities, looking for scholarships . . . like I’ve got a complete vision of my future, of what I want to do.

A job is sort of second level. Goals are the most important for me, to live happy, have interesting experiences, start a family. I say that about work, because in Monterrey lots of people live to work. I put that aside a little.

Everything, every little thing we do in class, I say, “What is the practical learning here? What is the added value?” And that makes sense of things. For people who don’t know what they want, well, even if you bring Deming [a quality management guru] to talk to them, they’re not interested. Well, Deming is dead, but you know what I mean.

In this case, the scholarship was positive reinforcement, like saying “Hey, what does having a scholarship mean to me? You don’t have to study because you have a scholarship, but because you want to do well . . . Without the scholarship I couldn’t have gone on, like now I value it more, and now it’s really important. It gives me the chance to be here at UDEM, I know, it’s a commitment that affects me and compels me to study and try hard and so on and to get ahead.”

“If you really want to get ahead and you’re mature, you can overcome any obstacle. But it’s really easier if your personal situation is favorable.” *Stable personal and family situations favor students having a full educational experience. Yet they also overcome unfavorable situations and take them as positive reinforcement.*

“My personal situation is a big influence. Thank God, I have had a fairly stable situation in every sense, family, economic, emotional, which has let me come with a

positive attitude and get very involved in my degree. Obviously, there are ups and downs, but generally stable.

With the scholarship, I don't worry about money. What a relief!

I have health problems that affect me a lot. It's an obstacle I've had to overcome. Why? Well, I'm not about to say gastritis kept me from graduating!

I'm going to tell you something. I admire my friends who work because they have to. They are earning Heaven. But I'm also sorry for them, because I think they are not enjoying this wonderful time. And anyway you have to work for the rest of your life. I hope they really have to work!"

3. Important People²

Successful students have or have had around them people who have played an important part in their formation and performance—their parents, whose support and encouragement they value; their friends, for companionship and camaraderie; their classmates, their personal group, with whom they share characteristics and interests like a joy in excellence, habits and enthusiasm. Finally, they think the average student is apathetic, bored, and mediocre, and they don't have much to do with them.

“My parents and my siblings are the best things in my life.” *Successful students constantly say their parents and families are the best things in their lives, in terms of teaching, support, encouragement, companionship.*

“I've always said that I've been lucky in life. The important people who have crossed my path have always left a positive mark—my parents, my siblings, my teachers.

My parents and my siblings are the best things in my life. I'm lucky that we all live together in Monterrey. They have been a fundamental part of my formation, and they

² The factors keep their original numbers, as shown in Table 4.3.

always taught me to have a lot of communication with them, both good and bad. Now at twenty-two, I go to them and tell them what's good or bad, and if it's bad, I usually tell them. No "they're going to chew me out." I'm confident, that is to say, "It didn't go well. What'll we do next time?"

My daddy says that when I was a little boy, my favorite sentence was, "You're the best daddy in the world." I said it over and over. Well, now I'm twenty-one and I don't say it all the time like before, but it's still my favorite sentence!"

"I've always had my parents' support." *When students describe their "experience" of their parents, the word they repeat most is support. Support for studying, for making decisions, for logistical and moral matters—support which creates confidence and security for the student.*

"I'm handicapped, and my family has been vital in helping me get ahead. We all have routines. I get to class at 7:00 A.M. Then my mama has to get up first, about four o'clock, to be ready to help me and get me ready, then to take me. And it's like that for a thousand things.

In my personal case, my parents support me a lot. They like what I'm studying. At first I was taking a different major, and didn't like that. And when I decided to change, my parents didn't like the new degree. Nevertheless I explained what it was all about, and they supported me fully. It's super important for them to support you. My family is very united, and they always support me.

Ah! My parents are the base for everything! I'm just learning to drive, I'm twenty years old, but they've always had the attitude of "I'll take you; I'll get you whatever you need for school. No matter if I have to come get you at midnight at some friend's house if you have a project to do."

My parents' support gives me confidence, makes me feel peaceful, like I'm not alone. Doesn't matter what happens, it's like have to drive and have insurance. You should see my mama! I'm fairly moody. Some days I lose heart, for a thousand reasons; but my mama is the most positive woman in the world. Talk to her just a minute, and you're right back on top of things! I love her so much.

When I picked a major, my parents' role was to give me the freedom. The first thing they said was, "This is one of the most important stages of your life, and the only one who can make the decision is you. Now when I look at the major I'm studying, I realize it's really mine. My parents never told me, "You have to study this or take that." They let me choose the major I wanted and the university I wanted."

"My parents are a source of encouragement, inspiration, and commitment . . . and I like to please them." *Outstanding students know their parents wish them the best and hope the best for them, both in their studies and in life. They pick up the messages of support and high expectations their parents send and the support they offer. Consequently, the students are proud and satisfied when they make significant achievements, their way of responding to expectations, and when they see their parents' reaction.*

"As long as I can remember, my daddy gives me the "okay" sign, the thumbs up—when he left me at school, when I played soccer, when I go out with my friends. I know it comes from his heart, and it has a positive effect. It did when I was a boy and still does.

My best days at school are when my parents come to see me to a play or a concert, and they like it. That's really nice for me. And I see other parents watching their kids playing soccer, and that must be really neat for them.

I have a lot of gratitude and admiration for my mama, especially because my daddy is not with us. She does everything for me and my sister. She supports us, she works, she keeps house. I admire all she does and the sacrifices she makes. That really makes you grow up.

My parents want me to get ahead and be happy being whatever I want to be.

My parents have always supported me a lot, and they like my experience in the UDEM community. But I'll tell you something, it's not all a bed of roses. We've got our problems here, or nearly always, but every semester they're invited to the reception for outstanding students. They come and they have a drink with the president, the vice president, and other administrators, and they go away happy. Those weeks all the

problems at home seem to disappear. You don't know how happy that makes them, that little certificate. It's what they wait for all year."

"My friends are an important support and good company!" *The positive influence of friends or sweethearts is common among successful students. Those relations provide support, companionship, security, encouragement, and of course friendship.*

"Well, since I'm handicapped, I know lots of people here at school who are a big help in all my activities, especially with the way the buildings are designed.

In the first semester, I met my best friend. We're in the same major, we're inseparable buddies even though we're completely different. She's blonde and tall, I'm short and brunette, but we've always been together. She's a constant support. I think that without her I wouldn't have had an easy time in lots of courses. She's just a pillar for me.

Listen, friends are the best thing about the place. I'm lucky that my friends are also my study buddies. We are together all the time: sports, homework, parties. And they don't leave me behind. All for one, one for all.

I've got a boyfriend I've been with five years. He supports me a lot, and since he's four years older, he has a better perspective on college because he's already working and helps me see things practically."

"Classmates are important. I like to run around with people like me, who try, who want to get ahead." *Successful students surround themselves with students like themselves, with similar tastes, habits, and personalities.*

"My school friends don't affect me a lot; well, yes, they affect me, like, what can I say? They don't change me, and you know, each to his own. On the other hand, they're already here, and, yes, they influence you to try hard or they make you want to quit, because you have to do lots of things together, like team projects and being together in classes all day.

I like to be with people who work they way I do. I look hard for people like me, and by now, well, you know who your party friends and your study friends are. I try to work

hard on a team, so we all work; the bad thing is, I'm a perfectionist and I almost always end up doing the whole project. I just love to organize and divide the work up, and I think so far everybody I've worked with has tried to do a good job, not just to get by but to do really well.

With my friends, it's a question of "God makes them and they get together." We're all the same, and we don't chat a whole lot in class. They're like me in lots of ways. We like to pay attention. My friends and I, we push ourselves, we motivate ourselves to keep on studying. I remember one friend in particular who was a very good student, and lots of times the two of us would stay here until night at the university, talking over a thousand different things."

"But there are lots of apathetic, unmotivated people. They get in the way. I leave them alone." *One of successful students' most frequent complaints is about the attitude of their fellow students—mediocrity, conformity, apathy, and lack of interest in learning. Those attitudes give rise to negative behavior, like talking in class, not doing their share in team projects, and failure to participate in institutional activities.*

"I believe the average student at UDEM is very mediocre, at least seems that way to me. And for somebody like me who comes ready to live the experience to the max, well you say, "What's going on? Don't leave me alone here!" And I could understand if you ran into one or two discouraged or uninterested people in one class, but it happens to everybody, and I mean it happens generally, in almost every class.

I run around with lots of people, I get along with everybody. I'm crazy about the people at UDEM. The atmosphere is very congenial, really neat, but frankly when it comes to academic questions, the degree of conformity is very discouraging.

But there are also those friends who keep you from getting ahead, what can I say? I'm talking about students who come here just because the social requirement is to study or go to college, but it's obvious they're not interested in learning.

There are people in my major with the attitude, as one teacher says, of dumb-bunnyism. They ruin the dynamics of a class, because the conformists and the lazy ones

don't want to learn, and they blow the rhythm of the class. They don't try, and the teachers drop them to try to keep the course and the class afloat. That can't be good, because I end up cheated. I've already had a job, and I know what you really have to learn everything all over, and I don't like those variations on account of students.

I don't like it in classes where the teacher is saying all the time, "Stop talking, stop talking, stop talking, or I'm going to put you out." Listen, they take three hours to teach a one-hour class! People like that don't pay attention and they don't let the teacher explain and teach, and that affects me because I can't concentrate. When I go into a classroom, I disconnect from everything else and hook into the class. They're still connected to their little world beyond.

The girls in my major who say they're here for an MRS degree are right, since all they want is to show their parents a diploma. But they are in the way, they talk all the time. Couldn't there be a special major for them? I mean, it's great that they came to college, but just stick them off by themselves somewhere!

My class is very divided. We are about fifty-five. On one hand are the MRS degree bunch, all happy with a seven; and on the other hand, there's us, ten or fifteen, who want to make 10s and are committed to the major. And then there are the great big sections which are horribly stressful. I mean, you ought not have to pay so much for such a mediocre degree. With all my parents have sacrificed, how am I going to come home with a 7?

In my major, marketing, I think the level of commitment to school is very low. I see zero participation, zero enthusiasm, lots of apathy. And then there's the teacher saying, "Please, be quiet." I mean, they say "please"! They need to grow up.

Our class is totally apathetic. I was in the student government, and when we organized congresses, even if they were free, almost nobody went. I remember on the day we elected student government, there was just one slate, and they had to get the votes of half the class. All at once, we had to go round people up so we could stay in office. Look, we're doing it for them, organizing events, representing them to the administration. Can you imagine? "Put your little finger right here, cutie pie. Thanks. Now go to class."

I don't know why it happens. At times I think their parents have no idea. I mean, the parents have to support them a lot, and some parents are interested and some are not. Also your friends, I think that influences you a lot. On the other hand are the teachers,

those who don't demand anything, who put with them, who never shake them up. Those students have probably been that way [apathetic] since first grade."

4. Faculty and Personnel

Successful students emphasize the key role of their instructors in their formation. They say good teachers have positive qualities related to their: academic preparation, teaching skills and experience, professional experience, enthusiasm and joy in teaching, love of the teaching field, and excellent behavior and personal skills. The "not so good" teachers lack some of those characteristics. They also identify the impact of institutional policies on the faculty's performance and the generally positive influence of administrators on their own performance.

"I've had some excellent teachers who've made studying a significant experience."

Successful students recognize their teachers' influence, whose good qualities are, among others, value based behavior, intense human personal treatment, high commitment, and enthusiasm, both for the teaching field and for teaching, good knowledge of what they teach, excellent teaching habits, and a rich professional experience.

"Sincerely, I don't know what teachers are full time or part time, I just know who's good and who's bad. I don't care if they're tenured or not.

I've always said that I've been lucky in life. The important people who have crossed my path have always left a positive mark—my parents, my siblings, my teachers. But the teachers have been a lot of it, who motivate me to learn, to try, to make decisions.

As far as values go, I think my teachers are fine. They tell you what's important and provide an example. I'm very happy with that. My teachers are very human, very accessible, very likeable. I think it's very good that they really listen to students, always

have time for them, especially the psychology faculty. I really admire them as people and professionals, and I really get along well with them.

The full time faculty with offices at UDEM are super or like really committed to their work. You know that because when somebody needs advice or counsel, they're there, and they seem really to want to the major to do well. At least it looks like that to me in the Education Department.

I believe lots of my teachers have motivated me for class and for my major, like their enthusiasm and conviction is catching. I had one teacher who just loved his field. Loved it, loved it! Have you run into people like that? I learned more in that course than any other in the degree plan!

Some teachers know what they're teaching and how to get it over, that is, they know how to soak you in the stuff. No matter if you've got to study 4 hours for the quiz, I like to study because I know the teacher knows I do and appreciates my effort. But above all, because I know I'm getting the goody out of him. There are not many like that in my major, and I've got them up on an altar, because they really make the difference in class.

The best classes are where the teacher knows how to make everything fast, dynamic, and not just blah blah blah. No, no, no. There have to be exercises and activities. If I ever teach, I want to teach that way.

I can't complain about the teachers I've had. I thought they were ready to be teachers, and the most important characteristic I can point out is that the best are really interested in the class. I had an English teacher who was really interested in the class, she brought activities every day, like she was really into teaching, and you don't see that everywhere.

My international business instructor taught us a lot academically. He followed the syllabus to a T, he was very practical, super practical. I also loved his comments. On every topic, he told us about his experiences, where he'd been here and there, well, he'd had the chance to travel a lot.

In my major I got all 10s, but the grade I'm proudest of is the 9 I got from professor —. He's super demanding and only two of us got a 9. Since it cost me most, I know I did my best right there.

Know what I'll be glad to tell you? That some teachers have been as interested in me as my own parents or friends. They helped me overcome something, they help me

solve problems, changed my thinking about the major, made me feel special, helped me over personal problems. And above all there was one teacher, one of those who want to do more, who changed my study habits. She taught me to concentrate—and in math, which is hard but where they really know how to teach.”

“The bad thing is you get some bad teachers, you don’t learn enough, and you’re not there to waste time, money, and opportunities.” *Teachers who made no impact on these students, in their opinion are lacking in teaching ability, knowledge of the field, interest, and enthusiasm, which leads to partial achievement of course goals, especially learning related to the field.*

“Some teachers know a bunch but can’t teach. They don’t realize that we learn differently, some get it the first time, some no, so there are lapses.

Some know a bunch and know how to teach but have no authority. One teacher, poor little thing, just a little girl with zero authority, spoke in the sweetest little voice and nobody paid her any attention. But I’m telling you, it’s not all her fault. Students should be interested and not make you yell at them or lower their grades to get their attention.

I don’t like that lots of teachers settle for so little. I think they should require more and should give more feedback on activities and homework. A lot of times you really work on a project, and you don’t know if you’ve done well or not, because there’s no communication. I’d rather they’d tell me how to improve than give me a ten.

Lots of teachers don’t know anything about the courses they teach. Last semester we had a problem with —. It made me mad because I took one course from him, then took another one in another field, and he taught the same stuff! We didn’t learn a thing the second time around, because he didn’t teach anything, he didn’t know anything about it.

My biggest disappointment is that there are classes where you don’t learn anything. Just that simple. The teacher doesn’t know the material, can’t teach, doesn’t want to teach. And you know you’re going to get him again and learn nothing again. Crap. Know why I get mad? Because as an engineer you don’t have the luxury of saying, “Well, I don’t really know anything about that.” School is just a little review of what the profession is. And

then you say, “What the Hell, I’ll just study it on my own,” but between the disappointment and discouragement the teacher causes, and the demands of the other courses, teachers who teach and make you study, you don’t learn anything about that discipline.

Have you seen movie previews? You’ll say, “I’ve got to see that one! It’s really good.” And you see it and it’s bad. That happens in class. You see the syllabus and you say, “I’m going to love this course.” And the teacher gets there and he’s a disaster, like the one who spent his time gossiping about The Tigress [*nickname of a Mexican woman teacher and actress, turned politician*], and I didn’t learn anything. I complained and nothing changed, and I still got a 10.

I have very good teachers, but they leave something to be desired as people and they’re involved elsewhere. In one course we haven’t had class now for two weeks. The teacher is excellent, but he’s got other priorities.

What I don’t like is where there’s a bad teacher who’s the only one who teaches that course. No alternatives, and you know you’re not going to like it because you’ve already had a course with him, but there’s no choice.”

“Things at UDEM affect what teachers can and can’t do. Whether they’re good or bad doesn’t all depend on them.” *Institutional policies affect faculty effectiveness and behavior both positively and negatively.*

“I like it that UDEM reinforces good things with the teachers, like punctuality and attendance, that they have to have good degrees, like we’re equals generally [*sic*].

A friend of mine teaches here and in two other schools, and he says the pay here is a lot better.

I think UDEM lacks a lot in terms of faculty. They don’t ask for much, and I think that’s because they’re overloaded with lots of sections, lots of students. They don’t have time to do it all, and they don’t keep up to date.

In my major, one person taught me seven different courses. One semester I had her for four courses at the same time. The semester was fatal, all the students noticed it. She doesn’t teach here any more because he didn’t have a graduate degree in law or something like that.

Last year they fired a whole lot of the best teachers. Personally, that affected me because they were the best teachers of psychology, and the new teachers don't have it, they don't require what they have to require.

I think the teachers were better when I came into the major five years ago, or more good ones than now. There are still some good ones and I'm glad about that, but all at once there was a policy of fewer teachers/more students, less personalized, and UDEM lost a lot there. It was about halfway through my studies, a year and a half ago, and it affected me. I felt like certain teachers were very good, and they left. I was a lot happier when I came in than now that I'm graduating, although I'm glad there are still some very good teachers.

I lived through the cuts SACS required, when the teachers without graduate degrees left, and I think I lost my best law professors, even more in finance. I lost a lot of teachers who were professionals and know just a whole lot. Now we have teachers, very learned and know-it-all, but not very practical."

"Like, sure the staff and the administration are important, because they way they treat you and take an interest affects you." *Successful students point out the importance of close, cordial relations with administrators and the importance of the support of administrators and key personnel, like the degree coordinator, the department head, and the secretarial staff.*

"With our coordinator, super good, she's always supportive, ready to help, although not all my friends think so. They say when you go, she doesn't take care of you. I tell them she's not there to take care of us or to work out or problems, but for other reasons, even though she spends time looking after us.

I have worked really well with the administrators in DICU, especially in the area of student leadership.

I know the coordinator is a big influence, but when I majored in X, the coordinator didn't motivate anybody, and now that I'm majoring in Y, the coordinator motivates me, supports me, sends for me and talks with me about my plans. That's a big influence.

Recently we had a problem with a course because of how it was taught. We didn't learn anything, and the administration listened to us but I don't think they did what they promised, since the damage was already done. I don't think the teachers are very well supervised. Some are obsolete or don't know how to teach or don't stick to the syllabus, but they're still there. And you ask, "Who's watching them?"

In high school, I thought I wanted to study psychology. When people came promoting the degrees, the psychology people didn't show up, so I went to nearest presentation, which was Education. Well, that's what I thought psychology was, and from the minute the coordinator explained the degree to us, I fell in love, fell in love with the degree, with the university, with the personal touch among administrators and students. I'm happy about that. My coordinator is the best in the university.

Well, I know there's a little of everything, lots of really good administrators, others who just say No. Generally they're very accessible, the higher ups. The president says hello and knows your name, asks you how you're doing, I love it. I don't like being treated like a number, and UDEM is very human, super human.

The secretaries are great. They always help you with problems or they get you in to talk to the administrators really fast. They show you what to do because the procedures are complicated. Once one even lent me money for the bus . . . and believe me, my buddies don't do that!"

6. Academic Elements

Successful students point out the importance of a well designed, relevant degree plan (as well as individual courses), and they show a high level of satisfaction with their degree plans. They also express gratitude for what they learn in practical and globalizing courses (FEP). They report mixed experience of the level of rigor—though they speak generally of levels lower than could be—and they disapprove intellectual dishonesty. They see the need for major improvement in the matter of large class sections. Finally, they report a high degree of compatibility with the institution.

“My academic experience here has been very good. I like the degree, the courses, the activities, but some things need to improve.” *Successful students are generally satisfied with their majors. They point out qualities like flexibility, good practical or universalizing courses, good specialty general and specialty areas. On the other hand they call for improvement, like out-dated syllabi, lack of specialty electives, and courses that don't deliver what they promise.*

“My academic experience in engineering has been good. I've liked the major. We've already had three kinds of practices, social service, and a seminar; and now the final project is very complete. It broadens your vision in lots of ways.

Generally I like the UDEM system. It's one of the things I value most about the university, because the program is complete and very flexible. Let's say you leave with a broad vision, as well as distinctive traits, because you can choose from various areas. Or like if we're talking about psychology, you really learn about everything, and you specialize in something, and at other schools they really specialize in just one area.

The schedule seems flexible, like you can rearrange your activities a lot, like professional practice.

Generally the courses in my major are pretty interesting, well sequenced, and they have a good practical component. What really matters here is the personal attention you get.

Nevertheless, in lots of courses you get there with high expectations from the academic program, and they don't deliver. I think my major needs updating. Some courses are good but others have outdated or obsolete stuff. I think they don't think about what students want or need when it comes to content.

The general education electives are excellent, because you can learn about other things. I took courses like basic electronics, astronomy, and nutrition, as well as algebra, things I never figured I'd have anything to do with, but they're useful all the time: to read about other things, meet people, be able to talk about lots of things, evaluate the world, or

at least understand my boyfriend who is an electronic systems engineer—and I'm majoring in education.

Part of the major is the elective courses in your specialty, and there I think UDEM fails to deliver on the promise. They run that out there to get you to pick this school, but of the twenty electives in law they offer, they only open four, always the same ones, so you don't have a chance to put your personal stamp on it.

Well, the major I picked was like an attempt to make everything more interdisciplinary, which helped me a whale of a lot, because I'm studying humanities as well as law, and I can do it without too much trouble. I've learned a lot in both fields.

I think I'm prepared, not only by the academics but also by taking part in student government, cultural events, sports. They've not been lacking, and I think I measure up to somebody from the Tech or other universities, and I'll be at least at the same level, if not better, and certainly not worse."

"Professional practice and the final evaluation project are helping me a lot."

Positive experience in synthesizing and practical courses and the final evaluation program is common among successful students, because among other things they let them recapitulate what they've learned and connect it to the workplace.

"Professional practice and the final evaluation project in engineering are helping me a lot. They showed me how to form a working method and to work under pressure.

The FEP is a tremendous experience. I'm learning a lot about one thing, and I'm connecting it with my professional field. I've got an excellent advisor. You know the joke about the mouse who had a lion for an advisor? Well, my advisor is the lion. But wait, I'm not the mouse! The FEP is the best academic experience I've had in the whole degree plan.

I think the degree I'm getting has a complete program, but now that I'm doing the FEP I realize what I know, that I know a lot, because the advisor doesn't tell you anything, just guides you, but you do it all. It's going well, and now I know the courses did what they were supposed to, except for one or two little things I think could be better. But that's why you do a graduate degree.

I think the FEP was better before, when the teacher concentrated on you. Now that there are lots of students and we're all doing the same thing and they can't be too demanding, it's just like one more course. Before you were by yourself and you really had to show your stuff. Now it's the same old team work: some work, others don't, everybody gets the same grade, and less effort."

"What I liked least about the academics were the huge sections." *Generally, successful students do not like big classes, mostly because of the lack of discipline among their fellow students and the inability of the teachers to do all the work—grade, answer questions, give feedback.*

"I took probability and statistics in a big class, and the teacher was hysterical. The course was very hard, and she couldn't answer all the questions in the time she had, much less see who was copying. In the back nobody paid attention, which disrespects the teacher. I don't have anything against big classes for core curriculum classes, okay, but for hard courses in your major, they don't work.

The problem is the teacher has too many people to supervise, too many exams, and if she wants to answer questions, she's got to cut the class short or try to teach it really fast.

I really don't believe the classrooms are ready for so many people. I mean, when you can't hear the teacher and you're all crammed in, don't say, "Put in more students." You have to consider the room and something else important which is the kind of course. Doesn't always work.

Being in a class with fifty women is devastating. You've got one teacher in a giant room with a bunch of girls who are not interested in the course and are happy with a 7, talking all the time and the teacher wasting time shutting them up, saying, "Be quiet, be quiet, be quiet, look, be quiet" and the class really loses a lot of quality. Where you could do ten things, you do four. Last semester I had three classes in a row with fifty or sixty women, and I ended up with a headache, saying, "I don't want to see them until tomorrow."

The problem is I see the teachers are frustrated. You can't teach every course in big sections, hard classes where you have lots of math and engineering methods. Even if he

wants to, the teacher can't pay attention to everybody, can't grade, can't advise. Poor things. And frustration is like a cold. It's catching.

My FEP had fourteen people in it. Listen, that's too much. A horrible experience. We've seen that all during my time here. When the teachers start leaving, they just combined more and more groups of students."

"My major is hard . . . In mine, they make you work, but it's so so . . . Mine is really easy." *Successful students report very different levels of academic rigor and demand in courses and degrees. Among the causes of low demand in some courses are lack of student interest and faculty rigor. High demand characteristics include interesting and challenging activities, and the need to invest lots of time in the course. Low demand characteristics are flexible standards, good grades for little work, lack of feedback from the teacher, and grade inflation. Low rigor causes successful students to be frustrated or just go along.*

"For me, the engineering degree has been heavy. I was in a prep school where they were demanding, but here it all tripled. It's been helpful in the sense that it helps me get ahead in everything. I think that's been a positive influence, because I want to show that I can do it.

My major is not so much reading and studying, like law, but doing projects. That's never stopped. We've had to get together n-thousand times for market research projects, promotions, and lots of nights without any sleep at all. I think you really have to stick to it, because it's not hard but it's lots of work, slow going.

I think most of the activities in education courses are challenging and interesting, though I've see nothing challenging in the core curriculum courses. They give you some information, and you have to do some papers, but nothing challenges you, even though I tried to learn it all, I'm telling you.

Well, seems to me there's lots of variation, because my major looks really demanding to me, but I see other majors that are very *lite*. I have to study a lot for exams

and hit the books and hit the books and hit the papers and hit the papers, and I see my siblings and friends in other majors who don't study, go out drinking during the week, and they do just fine.

Well, if you're really committed, you don't think it's too hard, you take what comes and do that. But those who aren't committed, for them any little thing is too much. I hear people complaining, but it's because they don't try.

The lack of seriousness and interest from fellow students affects the level of the course, among other things, because the teacher is thinking maybe he has to dumb down, and he dumbs it down because of people who shouldn't be in the class or in this university.

But I think it really depends on the teacher in the class to demand a lot, that's why it's a key requisite that they give you good teachers in required courses. I've got some good teachers, very demanding and disciplined, but I've got some teachers where people just play around and make a mess of the class. And the teacher shuts them up and shuts them up, and you say, "Well, what the Hell's up? Kick them out or do something!"

Truth is they don't ask for much, because I can just go to class and listen, do a little review at home, and I get by with that. Still there are some advanced courses where you have to invest a lot of time, but it's not exactly killer, you know?

UDEM is a really easy school. I've got a very high GPA, and I don't think I've had to work to earn it, or like I'm a very dedicated student, I study hard, but I don't think that GPA represents what I've done. I see that with lots of my classmates in psychology, they get nines and tens really easy and they're used to it. An eight is a catastrophe. Fact is, the teachers don't demand as much as I'd like them to, so lots of people graduate without reaching a very high level, and that's social irresponsibility.

In prep school, you did lots of things, lots of sports, and you were busy all day. When I came here, everything was over by eleven in the morning, and I took a double major to keep from going crazy from boredom.

I can make a comparison because I did an exchange in Australia and got a degree in Spain, and it's obvious, it's obvious. For the effort you put out here, they give you a 9 or a 10, where there you'd get a 5. Since I make 10s, I'd have to do a lot more to get a 10 there. I've got friends in universities in Colombia, and I see how we work here, and I think, we've got it easy here.

I think the feedback from teachers is deficient. I can't speak for all teachers or all courses, but it happens. I got here full of motivation, and at first I studied more. Read whole books, went to the library, turned in really good work, and we all got 10, even those whose work wasn't any good. So you say, "Why kill myself?" So then you do good, less good, then so so, and the teacher totally out of it. I get 10s in everything. It's discouraging, believe me.

It irritates me when they just give you a 10 with not a comment. There's always something you could do better, no?

I get 10 with minimum effort, and the teachers say Excellent, like they say to everybody. At times I think, "Man, I blew it, this paper is really mediocre." But I turn it in, and it's excellent. Does not make sense.

All you have to do is tell the teacher, "Listen, it's really hot. Let's get out of here," and he lets us go buy something and we all go to his office to talk about the class, AC and all.

Look, most teachers are flexible. They've each got a course syllabus. You just stick to that. But if you have a difficult personal situation, the teachers all support you and say, "Okay, turn it in later." They're very easy in that sense."

"There's lots of cheating." *Successful students indicate that there is a lot of intellectual dishonesty, which frustrates and amazes them.*

"There is a lot of cheating here; I think it's enormous, enormous, ridiculously enormous, to the point that you feel bad when you have to say, "I can't help you," because I have dictated exams from start to finish. You feel solidarity, camaraderie, and I sure wasn't that way when I got here.

There's lots of cheating, lots of people in teams who don't do anything or say in exams, "Just tell me what to write when the teacher isn't looking." Lots of people set themselves up to move up and advance without really learning the material. I have seen incredible things, and then I feel demoralized because why study if they're going to do just as well anyway? And it's all very normal. My experience in other places was definitely not that way."

“I feel happy here, like a fish in water.” *Successful students report high levels of compatibility among themselves and the institution, pointing out elements like fellow students, degree programs, extracurricular activities, humane atmosphere, type of students (full time), and opportunities (scholarships).*

“Since I’m very active, I like lots of things and like to be doing them. I feel happy here, like a fish in water, because UDEM offers lots of places to develop, not just academically, but in art, sports, student government, to say nothing of cultural events which are the best. This is a school for people who want to dedicate themselves to live the student life, to have the experience a hundred percent, like me.

I was going to the state university, but I got a scholarship and came here. Before I got here, I really thought people here were snobby, but they’re actually really great, nothing to it. You’re with people you can like at once.

About the scholarship . . . I never in my life wondered, “Wow, how am I going to pay for college?” So I’m extremely grateful to the university, to whoever decided to help me.

Know why I learned so much? Because I came here very motivated, and I’m leaving happy with my UDEM experience. Now, you know why so many say they didn’t learn anything, that UDEM is no good, that the faculty or whatever? Because they’re not motivated! Everything I did went well for me. The university has given me a lot, I’m not denying it; but the effort has been mostly mine. I don’t like to hear mediocre students badmouth the university. Look, it’s not the picture show! If you want to do well, you’ve got to work at it, and for that you have to be motivated. Then any school is good. If you get into one like this one, one of the best, so much the better, no?

I always, since UDEM prep, have feel like I was in a family, and even though the university is big, you’re still in a family. All the teachers know you and treat you very well.

I would have liked to go to a residential school, because here I see lots of people come and then go back home, and you lose a lot of the university ambience.”

7. Extracurricular Activities

Successful students point out the importance of a full student experience as real, full-time students. They also signal their interest in taking part in all kinds of extracurricular activities and the positive impact of carrying out meaningful Social Service.

“Now I know what “full time student” means. It’s not studying all day but doing things with the guys all day: sports, pastoral work, art, Social Service. I love it that UDEM is a school for full-time students.” *Successful students say being a full-time student implies taking part in many university activities, which they enjoy and whose benefits they recognize. They value being enrolled in an institution that offers multiple options of extracurricular activities.*

“Yes, because my brother is about to enter the university, and he told my daddy that there are lots of universities. My father told him, no, there are not many choices, because there are not many for full-time students and he should choose the one of them which he liked best and best suited him.

I don’t take part in a lot of those things you’re talking about, and since here you have to take 12 credits of co-curricular courses, at first I told my mama, “Come for me a little later because I have to stay. It’s required.” Then I took activities like clay modeling, formation in love, a catechism course, and some sports, and everything really cool. I don’t regret a bit of it, and now I tell my mama, “I’m going to stay late because I want to.” Really, they are things that make you grow and complement all the falderal of being a student.

I’m going to tell you something. I admire my friends who work because they have to. They are earning Heaven. But I’m also sorry for them, because I see they’re not enjoying this wonderful experience. And anyway you have to work for the rest of your life. Thank God, I have had the chance of going headfirst into the university experience, and it’s the max. Being in sports, student government, chatting with friends, going on

study trips, going to events for young people—I'll always thank my parents for the opportunity.

So many cocurricular classes, like musical and theatrical works, all that I really value. I've learned a lot, I have become more sensitive, and they have developed another part of my person. Personally I value that aspect of myself, like I said, as much or more than the professional or academic. I mean, I need it; it's like the human side of me.

I love it that there's an impressive list of cocurricular activities. That way you feel more at home, you spend more time at school, you meet more people, not just go to class and leave. That would be a bore. You can do more interesting things and meet more people. The best class in Pilates I've had was here, and it's free, so what's the problem?"

“I’ve been in everything, and I liked it all.” *Successful students are interested in very diverse activities and have high levels of participation in extracurricular activities.*

“Well, thank God, I've been in all the extracurricular things UDEM runs, from sports, student government, Social Service, student participation, civics, music, cultural events and outside I've always taken part in civic things, organizations in the city. I've always been a person who likes to take part in different activities, not just to fill up time but because I know it's good and is going to help me and others.

The best experience I've had up to now is to have been in a student group and now to be in FEUDEM (Federation of UDEM Students), because I've met people I would never know from class, people with vision, leadership, who are enterprising, those who say, “Let's get together to work, at ten tonight” and everybody comes. Moreover I've had the chance to meet important people—businessmen, politicians, athletes, people who write books.

I really liked the cocurricular courses, watercolor and public speaking the most. Especially public speaking, and now I think it's something I do really well. I like to go to congresses and the many activities that have been organized for my major. They broaden your vision of things; they've enriched me a lot, just like being in the psychology student association.

Really, it was a very good experience, although I think sometimes there's a little lack of support from the university. You want to do an event but everything is really expensive, like renting equipment or furniture, so you don't do it because there's no budget."

"My Social Service was a unique experience that changed my way of looking at my profession and life." *A satisfying Social Service which lets students discover the reach of their professional and personal performance is common among highly involved and committed students.*

"I had a great experience in Social Service, partly because it came from me, because I wanted to do it well, because I also know that you can get around it and get somebody to sign off on your hours with no problem, but I did it right, and it was a great experience.

I've always lived life one way, and then Social Service was a unique experience that changed my way of seeing my profession and my life, that made me see the other face of our society. Now I think my challenge is not to have personal success but to help others have a better life, see? Like getting aware of your role in the world.

I'd like to do my Social Service in a business, like lots of my friends, but here at UDEM you can't. You have to do it in an underprivileged community or something like that, and I went to a really poor place and ended up doing more than I had to, lots more. In fact I'm still at it, and they say they're putting me up for a state youth prize. But I did it that way really because I saw they needed me and that I could do something for others. I really liked it, and it was very gratifying."

8. Educational and Administrative Services

High successful and committed students say that educational and administrative services are important to their academic performance, although they realize that the academic element is the most critical. They say the library is important, that the collection is good but could be improved, that it is little used. They say student services are very

bureaucratic and that the computer labs, which they use a lot, do not have enough terminals.

“Services are important to me, and they need to be improved, but I value the efforts they’re making to improve. Above, we must not forget that the academic element is the most important.” *Successful students say services are relevant and generally in need of improvement, but they know the academic area is the most important, both for them and for the university’s leadership.*

“Services at UDEM are important to my academic performance, and I say they’re good; just good. It’s an area at UDEM which needs lots of improvement because of their impact on the students.

The services leave to be desired, though you can see improvement in the changes in the library and the cafeteria. I think, nonetheless, it’s a problem at UDEM that they’ve concentrated a lot on improving services and put a lot of money there at the expense of the academic part, which is after all the university’s main objective.”

“The library . . . very rich in material . . . with lots of chances to improve . . . and the students hardly use it!” *Students express various levels of satisfaction with the library. Some say it’s complete, others think differently. They say little about how important the library is to them but rather criticize others for using it little and the faculty for not promoting its use.*

“Generally the library seems fine to me. Yes, a couple of times the book that was supposed to be there wasn’t, but in general it helped me a lot in my courses. I thought it was complete.

The library. I’ve found it very rich in material for the research I’ve done, though the material is really old. At times there are books from 2003, but really it’s more often a book

from 1957 in its twenty-third edition, that is, not a new book. And you go to the book fair and you find newly published stuff, so there should be more up to date material at the initiative of the faculty and the research centers.

UDEM needs a lot of improvement, particularly the library. You notice it when you start professional practices or you graduate and you see what other organizations are doing. You say, "My books say the most obsolete things, because reality has changed." Or if you need a book for research, you go to the library and it's not there, or there are two copies, neither one in.

Look, our library is not Harvard's! No library is going to have all the books there are. In my case, for the education courses, I think there's plenty. They didn't have some books, but I know they're very specialized and needed only in one or two courses. I understood.

I believe it's a good service, but the truth is almost nobody uses it. This semester I haven't been into the library, or like, I haven't been there and I don't know, there are lots of students like me.

I almost never go to the library, or like I don't have any reason to go. I don't have any courses where they say, "Go to the library and get a book and research this or that." Beside it's not my way to go to the library and check out a book and read it on my own.

I'm not going to tell you I'm one of those who spends time in the library, but I went when they asked me to go, and everything was okay there.

Some teachers make you go to the library and others don't, but in lots of courses, they don't use it, or like I think I'm right to say I don't think the teachers are very worried about getting us to go.

I believe the library is at a disadvantage. People complain about the lack of material, that you have to go to the Tech or other libraries if you want to do good research. But I don't know how ready I would be as a program director or an administrator to invest a lot of money in a resource that is not used much, although I've seen plans to rearrange the library and including research in the courses to promote its use, and I think that's increasing use a little."

“SISC - The window services and the various procedures, very bureaucratic. They need lots of improvement.” *In general, successful students are not satisfied with the window services for reasons such as response time, quality of information, and general treatment.*

“I think there’s a real lack of communication between the program directors and the window service people at the Student Information and Support Center. They’ve given me contradictory information. Last week, for example, I went to pay for an advanced placement, and my director told me I needed authorization from the instructor, which would take a few days, and at the Information Center they said it wasn’t necessary. I just wasted my time.

My opinion about administrative services is that they’re super bureaucratic. It takes years to get anything done.

The registrar and admissions are fatal. When I was a work-study student there, I remember, a student came and asked for a letter saying he was a UDEM student, and we told him to come back in three business days. After three days, he came back, and we were doing the letter right then. Like, why make him wait? I don’t work there now, but it’s a lot better now with the new system they put in.

They’ve changed student services, but I think it took less time before, and you know, time is gold. All the procedures are super bureaucratic. They send you from pillar to post, from one window to another, or they won’t take care of you by phone and make you come here, finally! The Student Information and Support Center, horrible service. If you go there you have to have at least an hour to spend, and if there are five people there, you’ll wait an hour and a half, because of the eight stations, only three are open. And once I went and told the lady, “I have this question,” and she said, “You have to come on such and such a day’, and boom! She pushed the button for the next person to come, and I had other things to take care of. I thought it was rude. I run from the place. We all hate the place.

Registration and schedules, all that, I didn’t have any problem, except that sections close or you have to come at some difficult hour, but I imagine it’s that way everywhere. Managing all that hooraw must be a job.

I did my work study at the Information Center, so I can see it from both sides. I know that things take a while sometimes and lots of people complain, but that's because the procedures are complicated or there are lots of people or it's registration. It's a lot of work, and everybody who works there is going crazy. When you're on the other side, you say, I can't do this much!"

“Computers . . . much demand, little equipment . . . very good for wireless internet.”

Successful students say they use the computer labs constantly, and even though there have been improvements, more is needed, particularly the number of available terminals.

“As far as computers go, I think there's a lot to desire. Lots of demand, not many terminals, but the service is very good. The people who work there are very nice and helpful with very good dispositions.

The library computer rooms are not at the level we need. Some machines are just inexcusably slow, so bad you have to look for another one and stand in line for it.

I've seen some of the technological development at UDEM. The equipment is better now, even wireless internet, and that's cool because it really helps you develop, above all because at times there's no room in the computer labs. If you have a laptop, there's the web, and no problem.”

“Cafeterias. Expensive and crowded, though now there are more choices.” *Students say they use the cafeteria a lot, and though they know about the improvements in service, they hope for better in terms of choices, space, and price.*

“The food service should improve because it's pretty high, and I know of people who get sick. I mean the fact that a little bag of fries costs eight pesos in the cafeteria seems very high to me. I have to spend a lot of time standing in line there, and it's really crowded, not enough tables, so you waste time and you don't enjoy eating.

Generally UDEM's services are good. Perhaps the food is the only thing I'd complain about. Pretty limited variety and not very good quality. And I can never find anywhere to sit down. I've had courses in quality management, and I remember a book

that said the quality of a business is reflected in the food service it offers its employees or clients.

I like have plates at different prices, twenty, thirty, forty pesos, but even so, I've been hungry at UDEM. They should have options that fill you up and don't cost so much."

9. Physical Plant (Facilities)

Successful students say they really like the campus for its design, the chance to get together with others, and its geographical location. They invariably say parking is a problem that affects them considerably. They're glad the institution is installing air conditioning in the classrooms and carrying out other improvements on the campus.

"I love the campus! The atmosphere, the ambience, the buildings, and the site on the mountainside, which is very handsome." *Successful students say that they're generally satisfied with the physical plant and that the buildings are attractive and give them plenty of opportunities to interact with many people.*

"Personally I really like the campus because there are schools where people are separated by major or school, and here we're all together. That lets me enjoy people from lots of majors, not only in class but in the passages and other places. Between classes I run into people and say hello, even to kinder garden friends. I think our campus makes for a really cool social ambience.

I don't like it when they ask us in class to make suggestions about improving the campus and then they don't do anything about it. It's a waste of time.

A little while back my daddy brought a group of gringos that work where he does to the campus, and they loved it, said it was pretty, and were impressed by Monterrey and UDEM.

I think it's a complete campus, lots of buildings, pleasant, and they're trying to improve it. You can see the changes.

I think UDEM is located in one of the loveliest parts of Monterrey. The plant is great. The only thing I'd say is that instead of all the big buildings they're building now, they should improve the library and the computer labs, but in general I don't have any complaints, not even the heat in the classrooms. It doesn't bother me."

"Parking . . . is the number one problem for me in the university." *The theme about the plant which gets the most complaints from successful students is clearly parking. They say there's no room, it's expensive, and the (free) lots are in bad condition.*

"Well, for a start, the parking lots are really bad. It's the number one problem for in the university, both the free ones and the pay ones, because the pay ones keep going up and the free ones are trashed. I get flats going from stone to stone. I don't like to complain. My daddy says it doesn't matter, that the important thing is the faculty, the exchanges, the English, and he's right; but it's something we use every day, and every day you have to come an hour before class starts, because you'll be an hour finding a place, and even then sometimes you're late or you miss class because the teacher won't let you come in late. It's damned frustrating to get to class all tense. On the other hand, go to Galerías, if you go ten minutes early, you park just fine, it's free, you don't get muddy, nobody makes faces at you, and you don't get your car dirty. Crap!

Where I lose the most time, where I spend the most money unexpectedly, where I get maddest, is the parking lots, every time!

Why don't they fix them up and stop charging by the day? I mean, they're already charging tuition, well, put it in there! Have you ever gone to park at Valle Oriente? It's just five pesos, it's under a roof, and there's always a space.

So I wanted to buy a card to go into the pay lots, and I came and was in line for hours, and my turn never came. They sold just twenty places, what a stupid thing. It's rush hour all the time in the parking lots, and when it rains parking is horrible because you car get muddy up to here!"

Or like I was telling you, you leave home in a good mood, and when you are about one mile away from campus, you suddenly remember, "Oh, crap! The parking lots!" And then the next thirty minutes are the pits, I mean, the worst part of the day, finding a place,

getting mad, getting muddy, running like a madman so they don't close the door on you, and after you get to class you can't unload those thirty minutes like taking off a shirt."

"Classrooms . . . good in general, but how good it is they're putting in AC!"

Successful students say they're comfortable with the classrooms, though they say the heat is sometimes a problem—and they really like the air conditioning. They point out other areas for improvement, such as audiovisual equipment and the number of students per room.

"I didn't have any AC, and I think the temperatures are pretty extreme, very cold or very hot, and that affects your learning. I'm glad they're putting in AC, because when it's hot, it's impossible to concentrate. As for the AC, it's not important; probably a ceiling fan would take care of it.

The classroom as generally well equipped. I don't like it when you have to fight to get the projectors to work or you have to change rooms because of the TV.

As for classrooms, I think they put too many students in the room in a couple of my classes. All the seats were jammed up against each other. It was really uncomfortable."

"Others . . . laboratories, accommodations for the handicapped, green spaces." *The students say improvement is needed in accommodations for the handicapped and the laboratories, and they praise the gardens and the general location of the institution.*

"I wish the engineering labs were better with more software for engineers. They're vital, and I go where my friends work and they've got software for everything—maintenance, quality, labor management, material management, simulations—and we don't have any of that.

There's a lot left to do for the handicapped. Getting around the campus is really hard. I have to have help to go eat, I can't go alone, and that takes a lot of time. I also can't go see the teachers or take part in lots of events in lots of places. Although I know

there's a master plan and they're following it, and they're finally going to install elevators. All those years I had to take classes on the ground floor.

I remember making several suggestions to the president in a meeting several students took part in. There was the university architect and some engineers, and I was glad they paid attention to us, like not making the sidewalks so slippery. I like it when they listen and then do something.

I think the green spaces are really cool. My boyfriend is from Mexico City and once he came here with me, and he thought the university was lovely. He said he liked the gardens, the mountainside, that you don't hear any racket from traffic or factories. If you come here every day, you don't see it, so he helped me appreciate it. I think UDEM is cool."

Factors: Relative Influence on Engagement

To answer the study's third question—What is each factor's relative influence on the level of student engagement?—a single list of factors was generated based on those generated by the freshman and senior focus groups and presented in Tables 4.2 and 4.3. A single list was developed because the factors indicated by the freshmen on one hand and the seniors on the other were practically the same, which will be discussed in detail in Chapter Five. The “new” list of factors affecting student engagement contains the following nine elements: personal aspects, hopes and goals, important people, faculty and staff, fellow students, academic program, extracurricular activities, educational and administrative services, and physical plant.

The list was used to identify the relative influence of the factors in relation to the level of student engagement. In a survey (Appendix A, Section 1), participants were asked to order the 9 factors from the most influence on their engagement to the least. The factor of greatest influence was 9, the next 8, and so on down to the least, 1. The level of influence of each factor was obtained by averaging the values each received. The results are in the following pages.

Table 4.4 shows each factor and the average result of its relative influence. It also shows the rank of each factor, from most important to least important.

The average value of each factor was obtained by averaging the individual results of all the survey reports. The factor ranked 9 has the greatest influence on the level of engagement; the factor ranked 1 has the least (among those that have influence at all).

<p style="text-align: center;">Factors that Affect Student Engagement</p> <p style="text-align: center;">RELATIVE INFLUENCE OF FACTORS ON ENGAGEMENT</p> <p style="text-align: center;">Which factor influences you the most? The least? In between?</p> <p style="text-align: center;">Scale: 9 (influences me the most) through 1.0 (influences me the least)</p> <p style="text-align: center;">Rank range: 9 (factor with highest influence) through 1 (least influence)</p>						
Factor	Relative Influence					
	Freshmen (n = 14)		Seniors (n = 16)		All (n = 30)	
	Rank	Avg	Rank	Avg	Rank	Avg
1. Personal Aspects	8	7.8	8	7.8	8	7.8
2. Hopes and Goals	9	7.9	9	8.1	9	8.0
3. Important People	6	6.0	7	6.1	6	6.1
4. Faculty	7	6.3	6	6.0	7	6.1
5. Fellow Students	3	3.4	4	4.2	4	3.8
6. Academic Prog. & Elements	5	5.2	5	5.4	5	5.3
7. Extracurricular Activities	4	3.6	3	3.6	3	3.6
8. Educational & Adm. Svces.	2	2.6	2	1.9	2	2.2
9. Physical Plant (Facilities)	1	2.3	1	1.9	1	2.1

Table 4.4 Relative Influence of Factors on Engagement

The results in Table 4.4 are presented graphically in Figure 4.1 which shows the relative influence of each factor according to three groups: freshmen, seniors, and both groups combined.

Note: the taller the factor, the greater its influence and vice versa.

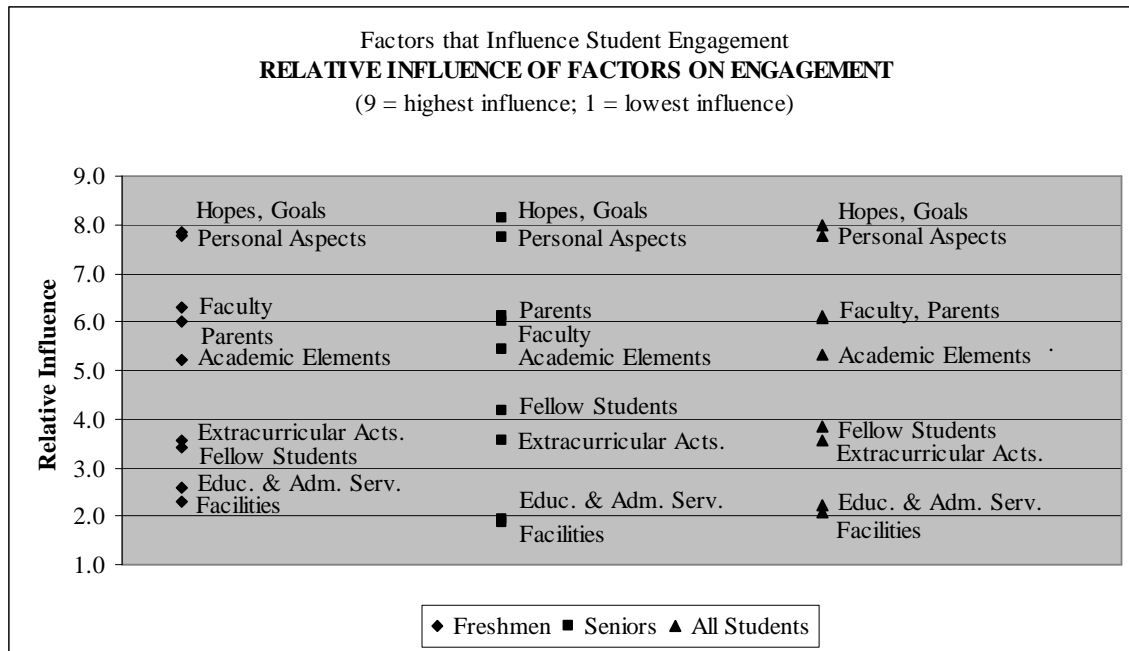


Figure 4.1 Relative Influence of Factors on Engagement

Factors: Performance Assessment

To answer the study's fourth question—What is the actual performance of each factor that affects student engagement?—the researcher broke the 9 principal factors into 52 sub-factors, based on the information generated by the focus group sessions, and created a survey (Appendix A, Section 2) which 14 freshmen and 16 seniors answered. Each sub-factor was evaluated, using a scale from 1 to 5, where 1 = very bad, 2 = bad, 3 = fair, 4 = good, and 5 = very good. The results of the individual surveys were averaged to find the performance level of each factor, according to the collective opinions of freshmen, seniors, and both groups combined.

The individual results may be interpreted as follows: an answer of 4 for the sub-factor “my interest in the field” means the student considers his interest in the field he studies “good.” An answer of 2 to the sub-factor “institutional reputation” means the student thinks the institution's reputation is “bad.”

The averaged results are presented four ways: by factors (9) in a table; by factors in a graph; by sub-factors (52) grouped by factor; and by sub-factors ordered from best to worst. In all cases, the results for freshmen, seniors, and both groups combined are presented.

Table 4.5 shows each factor and the average result of the assessment of its performance. The table also shows the factor's place in its rank from best to worst performance.

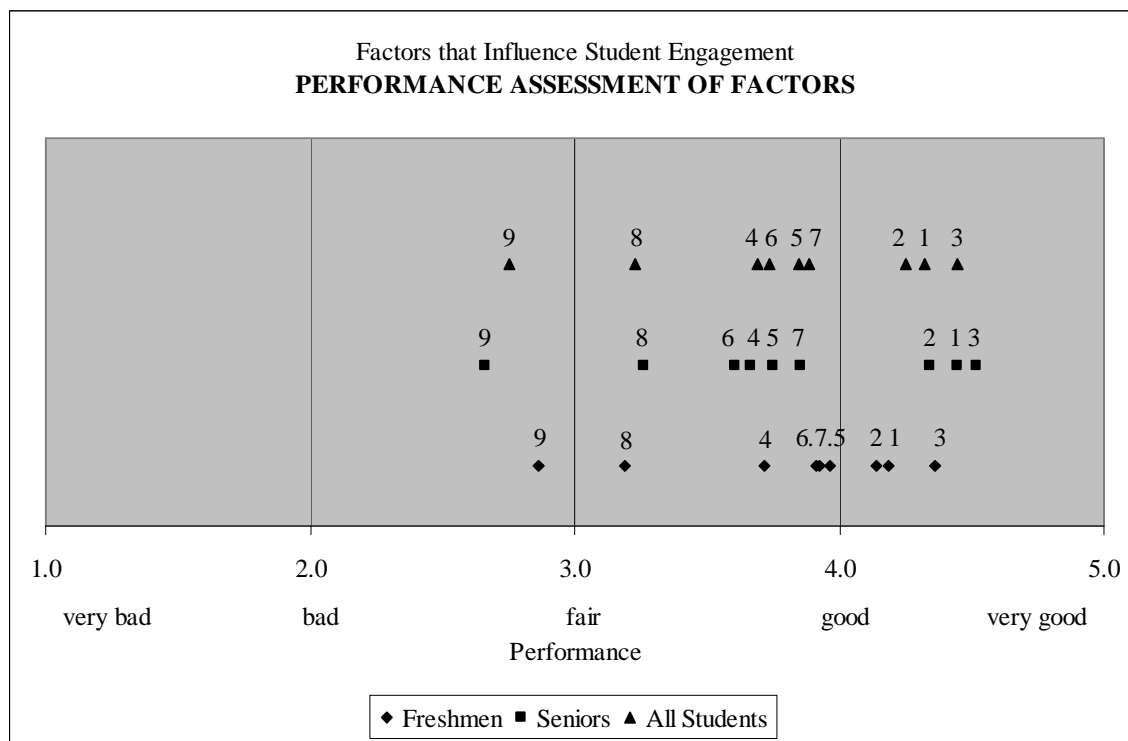
The average value of each factor was obtained by averaging the individual results of each appropriate sub-factor in the surveys. In regards to the ranking, a factor with a value of 9 had the best performance; a factor with an 8 is second in order; and so on down to 1, which is the worst performance.

<p style="text-align: center;">Factors that Affect Student Engagement</p> <p style="text-align: center;">PERFORMANCE ASSESSMENT OF FACTORS</p> <p style="text-align: center;">How is each factor doing?</p> <p style="text-align: center;">Scale: 1=very bad; 2=bad; 3=fair; 4=good; 5=very good</p> <p style="text-align: center;">Rank range: 9 (factor with best performance) through 1 (worst performance)</p>						
Factor	Performance Assessment					
	Freshmen (n = 14)		Seniors (n = 16)		All (n = 30)	
	Rank	Avg	Rank	Avg	Rank	Avg
1. Personal Aspects	8	4.2	8	4.4	8	4.3
2. Hopes and Goals	7	4.1	7	4.3	7	4.3
3. Important People	9	4.4	9	4.5	9	4.4
4. Faculty	3	3.7	4	3.7	3	3.7
5. Fellow Students	6	4.0	5	3.8	5	3.9
6. Academic Prog. & Elements	4	3.9	3	3.6	4	3.7
7. Extracurricular Activities	5	3.9	6	3.9	6	3.9
8. Educational & Adm. Svces.	2	3.2	2	3.3	2	3.2
9. Physical Plant (Facilities)	1	2.9	1	2.7	1	2.8

Table 4.5 Performance Assessment of Factors

The results in Table 4.5 are presented in a graph in Figure 4.2, where the level of performance of each factor is presented according to the opinion of the three groups: freshmen, seniors, and all participants.

Note: the further the factor is to the right, the better students evaluate its performance and vice versa.



- Factors
- | | | |
|---------------------|---------------------|-------------------------------|
| 1. Personal Aspects | 4. Faculty | 7. Extracurricular Activities |
| 2. Hopes, Goals | 5. Fellow Students | 8. Educ. & Adm. Services |
| 3. Important People | 6. Academic Program | 9. Facilities |

Figure 4.2 Performance Assessment of Factors

Table 4.6 shows the results of the assessment of the performance of the 52 sub-factors considered in the study, organized by factor.

<p style="text-align: center;">Factors that Affect Student Engagement</p> <p style="text-align: center;">PERFORMANCE ASSESSMENT OF SUB-FACTORS</p> <p style="text-align: center;">How is each sub-factor doing?</p> <p style="text-align: center;">(scale: 1=very bad; 2=bad; 3=fair; 4=good; 5=very good)</p>			
Sub-factors	Performance Assessment		
	Freshmen (n = 14)	Seniors (n = 16)	All Students (n = 30)
1. PERSONAL ASPECTS	4.2	4.4	4.3
1.1 habits (organization, discipline)	4.2	4.4	4.3
1.2 self-confidence	4.3	4.4	4.3
1.3 interest in the discipline / program	4.5	4.6	4.6
1.4 time on task (academic, extracurricular activities)	4.0	4.3	4.2
1.5 live according to human values	4.4	4.6	4.5
1.6 class participation / asking questions / ask faculty	4.0	4.7	4.4
1.7 personal situation (economy, emot. stability, health)	3.9	4.1	4.0
2. PERSONAL HOPES AND GOALS	4.1	4.3	4.3
2.1 goals (defined, clear)	4.0	4.3	4.1
2.2 commitment to goals (walk the talk)	4.3	4.4	4.4
3. IMPORTANT PEOPLE (parents, siblings, boy/girl f)	4.4	4.5	4.4
3.1 positive influence - parents	4.7	4.7	4.7
3.2 positive influence - family (siblings, uncles, aunts)	4.4	4.5	4.5
3.3 positive influence - boy/girl friend	3.9	4.5	4.3
3.4 positive influence - friends (in and out of the college)	4.2	4.4	4.3
4. FACULTY	3.7	3.7	3.7
4.1 knowledge / professional experience	4.1	3.8	4.0
4.2 teaching skills, abilities	3.4	3.3	3.4
4.3 (their) motivation, commitment, enthusiasm	3.4	3.5	3.4
4.4 mi relationship / trust / communication with them	3.9	4.3	4.1
4.5 faculty inspires, encourages, guides, coaches	3.7	3.4	3.6
4.6 program head; service, availability, competence	3.8	3.6	3.7
5. FELLOW STUDENTS	4.0	3.8	3.9
5.1 commitment, fellow students (immediate circle)	4.4	4.6	4.5
5.2 commitment, fellow students (all students)	3.5	2.9	3.2
<i>...table continues</i>			

Table 4.6 Performance Assessment of Sub-factors

Sub-factors	Freshmen (n = 14)	Seniors (n = 16)	All Students (n = 30)
<i>...continued</i>			
6. ACADEMIC PROGRAM & ACAD. ELEMENTS	3.9	3.6	3.7
6.1 major (design, relevance, flexibility)	3.9	3.3	3.5
6.2 classes: content (relevance, quality, design)	4.1	3.6	3.8
6.3 large sections (impact, effectiveness)	2.8	2.0	2.3
6.4 capstone course: relevance, quality, learning	3.0	3.9	3.8
6.5 professional practices: relevance, quality, learning	4.5	4.4	4.4
6.6 academic rigor: appropriate to be successful	4.1	3.4	3.7
6.7 academic awards and distinctions	3.9	3.7	3.8
6.8 reputation / prestige: Institution	4.1	4.0	4.1
6.9 humanistic environment: Institution	4.0	3.8	3.9
6.10 fit (myself as student, and the institution)	4.3	4.3	4.3
7. EXTRACURRICULAR ACTIVITIES	3.9	3.9	3.9
7.1 extrac. classes and acts: relevance, opportunities, qua	4.0	4.2	4.1
7.2 conferences, academic events	4.0	3.4	3.7
7.3 student gov, associations, groups: oportun, relevance	4.1	3.8	3.9
7.4 social service: relevance, impact, learning	3.7	4.3	4.1
7.5 support to students from other states / countries	3.0	3.3	3.1
7.6 my own participation in extracurricular activities	4.2	3.9	4.0
8. EDUCATIONAL AND ADMINSTR. SERVICES	3.2	3.3	3.2
8.1 administrative services (cleaning, security...)	3.6	3.6	3.6
8.2 registrar's office (one stop office): services offered	2.8	3.3	3.0
8.3 library: collection, service hours, service	3.4	3.5	3.4
8.4 scholarship: opportunities	3.5	3.9	3.7
8.5 work on campus (scholarship): relevance, quality	3.7	4.0	3.9
8.6 timely information related with events, deadlines	3.6	3.1	3.4
8.7 computer labs: number of computers, service, quality	2.1	1.9	2.0
9. PHYSICAL PLANT (FACILITIES)	2.9	2.7	2.8
9.1 parking lot: accessibility, availability, cost-benefit	1.6	1.7	1.6
9.2 classrooms: equipment	2.7	2.8	2.7
9.3 classrooms: air conditioning	2.8	2.0	2.4
9.4 facilities for the handicapped	1.7	1.7	1.7
9.5 cafeteria (service, space, cost-benefit)	2.5	2.4	2.5
9.6 areas for students (to hang out)	3.4	3.0	3.2
9.7 areas to study / teamwork	3.7	3.2	3.4
9.8 green areas / gardens	4.4	4.5	4.5

Table 4.6 Performance Assessment of Sub-factors

Table 4.7 shows the sub-factors which affect the level of student engagement with their respective performance evaluation, ordered from greatest to least.

<p style="text-align: center;">Factors that Affect Student Engagement</p> <p style="text-align: center;">PERFORMANCE ASSESSMENT OF SUB-FACTORS - RANKED</p> <p style="text-align: center;">How is each sub-factor doing?</p> <p style="text-align: center;">(scale: 1=very bad; 2=bad; 3=fair; 4=good; 5=very good)</p>			
Sub-factors	Performance Assessment		
	Freshmen (n = 14)	Seniors (n = 16)	All Students (n = 30)
----- between very good and good			
3.1 positive influence - parents	4.7	4.7	4.69
1.3 interest in the discipline / program	4.5	4.6	4.57
1.5 live according to human values	4.4	4.6	4.50
5.1 commitment, fellow students (immediate circle)	4.4	4.6	4.50
2.2 commitment to goals (walk the talk)	4.3	4.4	4.47
3.2 positive influence - family (siblings, uncles, aunts)	4.4	4.5	4.47
9.8 green areas / gardens	4.4	4.5	4.47
6.5 professional practices: relevance, quality, learning	4.5	4.4	4.44
1.6 class participation / asking questions / ask faculty	4.0	4.7	4.37
1.2 self-confidence	4.3	4.4	4.33
1.1 habits (organization, discipline)	4.2	4.4	4.30
3.4 positive influence - friends (in and out of the college)	4.2	4.4	4.30
3.3 positive influence - boy/girl friend	3.9	4.5	4.29
6.10 fit (myself as student, and the institution)	4.3	4.3	4.27
1.4 time on task (academic, extracurricular activities)	4.0	4.3	4.17
7.4 social service: relevance, impact, learning	3.7	4.3	4.14
2.1 goals (defined, clear)	4.0	4.3	4.13
4.4 mi relationship / trust / communication with faculty	3.9	4.3	4.10
7.1 extrac. classes and acts: relevance, opportunities, qua	4.0	4.2	4.10
6.8 reputation / prestige: Institution	4.1	4.0	4.07
7.6 my own participation in extracurricular activities	4.2	3.9	4.04
1.7 personal situation (economy, emot. stability, health)	3.9	4.1	4.03
...table continues			

Table 4.7 Performance Assessment of Sub-factors (Ranked)

Sub-factors	Freshmen (n = 14)	Seniors (n = 16)	All Students (n = 30)
<i>...continued</i>			
----- between good and fair			
4.1 faculty: knowledge / professional experience	4.1	3.8	3.97
7.3 student gov, associations, groups: oportun, relevance	4.1	3.8	3.92
6.9 humanistic environment: Institution	4.0	3.8	3.87
8.5 work on campus (scholarship): relevance, quality	3.7	4.0	3.87
6.4 capstone course: relevance, quality, learning	3.0	3.9	3.83
6.2 classes: content (relevance, quality, design)	4.1	3.6	3.80
6.7 academic awards and distinctions	3.9	3.7	3.79
6.6 academic rigor: appropriate to be successful	4.1	3.4	3.73
4.6 program head; service, availability, competence	3.8	3.6	3.70
8.4 scholarship: opportunities	3.5	3.9	3.70
7.2 conferences, academic events	4.0	3.4	3.67
4.5 faculty inspires, encourages, guides, coaches	3.7	3.4	3.57
8.1 administrative services (cleaning, security...)	3.6	3.6	3.57
6.1 major (design, relevance, flexibility)	3.9	3.3	3.53
4.3 faculty: (their) motivation, commitment, enthusiasm	3.4	3.5	3.43
8.3 library: collection, service hours, service	3.4	3.5	3.43
9.7 areas to study / teamwork	3.7	3.2	3.43
4.2 faculty: teaching skills, abilities	3.4	3.3	3.37
8.6 timely information related with events, deadlines	3.6	3.1	3.36
5.2 commitment, fellow students (all students)	3.5	2.9	3.20
9.6 areas for students (to hang out)	3.4	3.0	3.17
7.5 support to students from other states / countries	3.0	3.3	3.14
8.2 registrar's office (one stop office): services offered	2.8	3.3	3.03
----- between fair and bad			
9.2 classrooms: equipment	2.7	2.8	2.73
9.5 cafeteria (service, space, cost-benefit)	2.5	2.4	2.47
9.3 classrooms: air conditioning	2.8	2.0	2.38
6.3 large sections (impact, effectiveness)	2.8	2.0	2.32
8.7 computer labs: number of computers, service, quality	2.1	1.9	2.00
----- between bad and very bad			
9.4 facilities for the handicapped	1.7	1.7	1.68
9.1 parking lot: accessibility, availability, cost-benefit	1.6	1.7	1.63

Table 4.7 Performance Assessment of Sub-factors (Ranked)

Relationships Among Factors

To answer the study's fifth question—How are the factors that affect student engagement related?—graphs known as *Systems Influence Diagrams (SIDs)* were created which show systematically the relations between the factors identified. Also generated were narratives based on the opinions of the participants which explain why those relations exist. SIDs and narratives were created for both freshmen and seniors.

Fifteen (15) freshmen were interviewed, using a protocol based on the 8 factors they identified in a focus group session. For each of the 45 possible pairs of factors (relations), each participant was asked which affects which and why that is so. Then the procedures described in Chapter Three were applied to generate the *System Influence Diagram* or *mind map* and the narrative which tells why the factors affect or relate to each in the manner shown in the mind map. Although the freshmen identified 8 factors which affect student engagement, when they were asked about the relationship between them, they included 10 elements. The two “new” elements are the supposed results of the system: learning-persistence, and student success. Those two elements were added so the system would make more sense. (Recall that the original task posed to the students was, “Identify the factors which affect your engagement and therefore your learning, your persistence, and your success as a student.”) Seen from another perspective, the factors were included because they are in the conceptual model which is the basis of the study, as shown in Figure 1.1. The model signals that there are factors (identified by the participants) that affect the level of student engagement, which is co-

related to student learning, persistence, and success. Both elements were added to the system.

The same procedure was used with the seniors, using the 7 factors they identified in their focus group and two added by the researcher. All interviews, both freshmen and seniors, took place with the sessions on the perceptions of factors, between November 8 and November 26, 2004.

The mind maps and the narrative which explains them for both freshmen and seniors follow. Appendix B shows the data used to prepare both SIDs.

Freshmen: relationships among the factors that affect their engagement

The perceptions of freshmen students of how the factors that affect their engagement are related are shown in the following diagram, Figure 4.3. Appendix B shows the data used to prepare it. It should be read from left to right, as in “relevant people affect my personal qualities, which in turn influence my life goals . . . which finally determine my success as a student.”

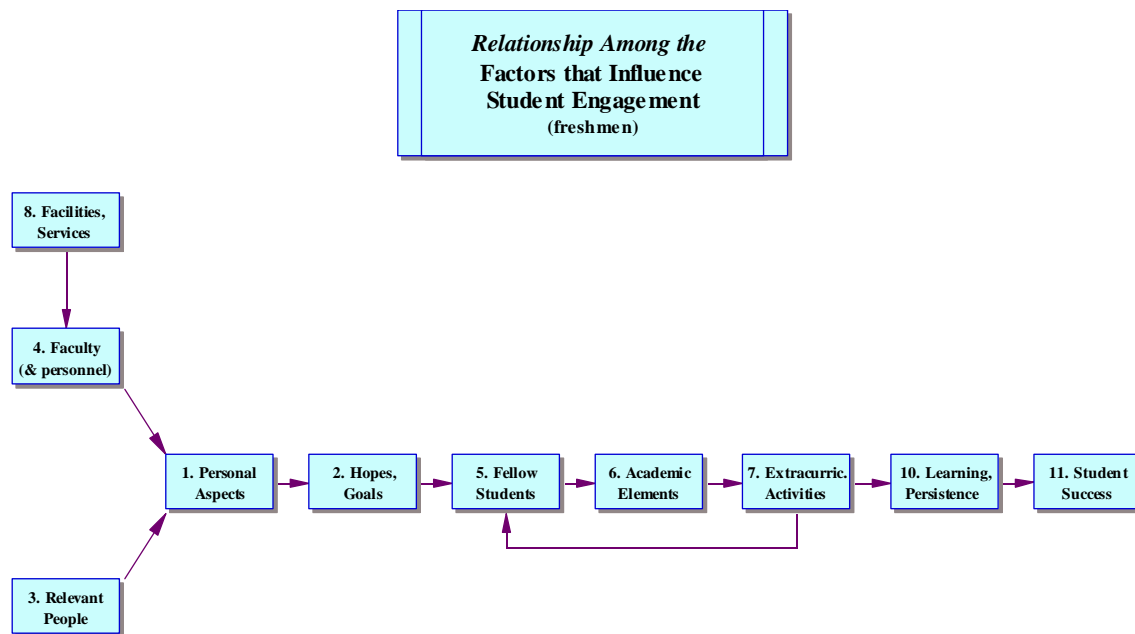


Figure 4.3 Relationships Among Factors: Freshmen

Freshmen: perceptions of the relationships among the factors

The narrative that explains the relations between the factors in the system follows. When a student said, “Factor Y affects Factor X,” the interviewer asked, “How?” The answers to that question were used to generate the narrative.

IQA procedures revealed that there are 41 direct relations within the factors in the freshmen system; those relations cause about 80% of the system’s variation and were used to create the SID. The SID, however, shows only 10 of those direct relations, in the form of arrows. The other 31 are not seen, because they are redundant, but they are there!

The 41 relations are described below, grouped by factor. For each factor, the narrative identifies 1) which factors affect, with direct arrows or via other factors, and 2) relevant student perceptions which describe the relation. Relations are presented as they appear from left to right in the SID; that is, beginning with the factors which most influence the system (drivers) and ending with the results (outcomes). Texts in quotation marks are participant comments.

Relevant People affects: Personal Aspects, Hopes and Goals, Fellow Students, Academic Elements, Extracurricular Activities, Student Learning and Persistence, and Student Success. *Clearly, relevant people, especially parents, are major system drivers. They affect almost all the factors that influence students’ academic experience, particularly those related to the students’ personal aspects, such as habits and goals.*

Student comments reflect the positive effect of Relevant People on most factors in the system.

Personal Aspects. “Like I said a minute ago, my parents principally have determined who I am, that is my habits, my way of being, my attitudes all depend on them. My parents taught me good habits ever since I was a little girl. I’ve never had problems. I’ve always made good grades. I’ve never had trouble doing assignments or homework, and I think that’s good. They never rewarded me; it was always, “That’s your responsibility.” Now I don’t do it because I have to, because I don’t study if I don’t want to. I do it because I enjoy it and because I know it’s best for me. My parents did a good job!”

Hopes and Goals. “Because I think you parents really influence the goals you have. Personally they’re always encouraging me to do better, to expect more, to try to succeed, and all that. Because my daddy says I can achieve more than they did, you know, like a good education, my own house, the chance to study abroad, and that can lead me to better goals.”

Fellow Students. “I don’t really believe they affect my fellow students much, but I think your parents affect the kind of people you surround yourself with. Not so much now, but I think of the days when my parents asked me, “Who are you getting together with? What are those kids like? And their folks?” It’s like the people you hang out with depend on your parents in a way, because they want you to run around with good people.”

Academic Elements. “Well, I really like my major, partly because my mama studied it too, so I can chat with her about it. Sometimes my friends are surprised that I talk with her about Pedro Páramo and those novels, and I know it’s because they can’t. . . . On the other hand, my father supports me, because he has had lots of experience, and I always go to him. I say, ‘Look, we did so and so in class,’ and he always knows all about it and has experience. He shows me the practical side of the idea...”

Extracurricular Activities. “Your parents make you like to take part in everything, like my daddy is always getting me to explore new things, like the news, like music, weird sports like mountain climbing, and religious questions. But go figure, my folks say that taking part in lots of activities, like student government and specific associations, will give me lots of contacts and that’s the most important thing you get out of school.”

Student Learning and Persistence. “I think your parents and their support encourage you get ahead, to learn more. I always remember how my sister was studying architecture, and she said she was fed up and wanted to quit. My parents told her she could, and she quit. But then I saw my father tell her that for just a semester she needed to graduate and develop herself . . . like he knew she just needed a break. A semester went by and my sister went back to school and graduated with honors. So I think your parents really influence what you learn and in your desire to keep on studying.”

Student Success. “I believe there’s nobody more important to help you succeed than your parents and your family. When I get my diploma, I’m going to give it to them . . . Wait. Nobody is more important than them *except me*, of course.”

Faculty affects: Personal Aspects, Hopes and Goals, Fellow Students, Academic Elements, Extracurricular Activities, Student Learning and Persistence, and Student Success. *Just like parents, faculty play an active role in students’ university experience. Student use of the word “support” is notable: “They teach me, they encourage me, they watch me.” Students consider faculty the key institutional factor to their success.*

Personal Aspects. “My teachers show me study habits, encourage me to go on, infect me with their enthusiasm, and help me understand the *why*, the sense of what we’re learning. Did I tell you about my teacher to Introduction to Engineering? Like, he totally changed my way of looking at myself . . . Now I value myself more, I know I can do more, my self-esteem has risen a lot.”

Hopes and Goals. “Like, the faculty make you set really high goals. One told us once, very seriously, that we were not going to graduate without really knowing English, and I took that to heart, and I spent 10 months going to classes on Saturdays.”

Fellow Students. “The pros really affect your friends. Personally, I don’t like it when they put up with bad students, because that lowers the level of the class. . . With all the projects and homework, the faculty help you look for people like yourself, in my case people who like to study, because without their help you’re sunk, and the faculty are key to helping you find good friends.”

Academic Elements. “Well, for me the faculty is my degree. They’re going to take me by the hand and make a good lawyer out of me. If I have good teachers, the degree program will be excellent. The rest doesn’t matter, classmates or the physical plant, but if the teachers are bad, then I’m not going to like the courses and nobody can guarantee I’ll learn much, no matter how good the tennis courts and the library and all that are.”

Extracurricular Activities. “Well, just like the profs determine if the courses are good or not . . . especially extracurricular courses, where you don’t have pressure to make a good grade, like there you need more than a teacher, there you really need an enthusiastic one, that can really get you into the course.”

Student Learning and Persistence. “You know, it affects me a lot, but positively, that some teachers invite me to their offices just to ask me how it’s going, if I have any problems, that I don’t throw in the towel, that we’ll all be together the day we take the graduation pictures, and all that is a big a plus that makes you want to graduate. . . If I could tell you the most important factor in my desire to learn, it’s the teacher. I love teachers who make you learn, learn things, who say, “We’re going to learn this, and here’s how it will help you.” Have you ever taken a course you were scared of or where the professor doesn’t care? You don’t learn a thing!”

Student Success. “Well, a while back I said my parents and I are the most important whether I do well in my major, but now I’m telling you that the teachers are super important, too, because that’s who gives you the learning and the UDEM values.”

Facilities and Services affects: Faculty, Academic Elements, Extracurricular Activities, Student Learning and Persistence, and Student Success. *Successful students point out that the quantity and quality of services at their disposition determine, in part, their teachers’ impact and the quality of their academic experience, as well as their learning and success as students.*

Faculty. “I don’t think the faculty always gives all they can because sometimes they don’t have the resources they need; like in the big classes, it’s not their fault, but there’s always noise and heat, and they are affected. They don’t have a microphone and people

don't pay them any attention. A good classroom helps a professor a lot. I have seen personally that teachers really have a problem with the noise, inside and outside the classroom. In the United States, classrooms are closed, like offices, and noise doesn't come in from outside."

Academic Elements. "Well, you can get more out of class if you've got good resources and good facilities. For example, if you've got a library that works and has lots of books, and if you have good engineering labs, then you can take the maximum advantage of your classes and vice versa. I mean, the physical plant isn't the most important thing, but it helps, definitely."

Extracurricular Activities. "I've noticed that now we've got lots of buildings and things at our disposal, and that lets me take greater advantage of sports and cultural events. I went to a prep school without many resources, and here at UDEM the plant is much better. You can come and run more at ease, or like you've got a cubicle where you can work with your buddies in student government."

Student Learning and Persistence. "Well, it's like I say, sometimes I get fed up with studying, because here at UDEM there aren't any decent cubicles for studying, and it's a big pain to go looking where you can go, and that affects your desire to go on giving it your best. . . I love the campus, I like to come, I like the atmosphere, the buildings, the people. I like to see it clean and green."

Student Success. "Well, I think it's easier to do well in a school where you have good services, for example, better schedules or computers, than where you don't have a lot."

Personal Aspects affects: Hopes and Goals, Fellow Students, Academic Elements, Extracurricular Activities, Student Learning and Persistence, and Student Success. *Successful freshmen think their personal aspects are important drivers of their academic experience, their learning, and their personal success. They think they are the principal actors in the "academic history." Their personal qualities, attributes, and habits*

determine a lot of what happens with their friends, classes, extracurricular activities, and of course their learning and success.

Hopes and Goals. “My goals depend on my values, from where I want to go, from my desire to improve. On the other hand, meeting my goals depends on my strength of will, my persistence. . . I think mediocre people are that way because they’re not interested in their major, not from lack of interest but because they don’t have goals, and so then why fight, see? It’s all the same to them if they graduate or not, if they learn a lot or a little, because they’re not married to psychology.”

Fellow Students. “My personal things affect my friends in the sense that I look for friends like me. . . I’m telling you, mostly I try not to choose but just to deal with everybody here, and when somebody shares my ideas and tastes, well, then we work together and become friends. . . I don’t let my friends influence me, but quite the opposite, because I already have who I am and what I want to do worked out. So they’re part of school, but they’re not going to change me.”

Academic Elements. “If I want to do well in school I have to use the best habits I have, and I believe the most important of them is to organize your activities well. . . For example, I think it’s super important to have figured out which major is for you, understand? If you like your major and it attracts you, then the academic experience will be good; but if you don’t like it or you chose badly, then college will be horrible, and the degree plan won’t be to blame!”

Extracurricular Activities. “I believe if you’re anxious to learn more and you have positive attitudes, then extracurricular activities are excellent; if not, they’re just a requirement you have to meet. Since I always get along with teachers, I’m always their pet, and they help me in class, take an interest in me, understand me better. So my behavior affects what happens in the classroom and in the non-classroom activities.”

Student Learning and Persistence. “I mean if you have the determination to get ahead, then there’s no excuse, no obstacle can keep you from going ahead with your plans; but if you’re not convinced of what you want or if you’re wishy-washy or not serious, then you’re very likely not going to learn enough and you’re not going to graduate.”

Student Success. “I believe skills and habits are the biggest influence on student success and good grades. Personally, I think I’m very intelligent, but in class the people

who get good grades are the ones who study and try hard, not necessarily the smartest. I'll tell you: to succeed in school, trying hard is more important than being smart. Because in the final analysis, doing a degree is an adventure you undertake almost alone . . . and if you have the right personal tools, you'll surely succeed. . . . I'm talking about discipline, organization, and responsibility."

Hopes and Goals affects: Fellow Students, Academic Elements, Extracurricular Activities, Student Learning and Persistence, and Student Success. *Having clear and ambitious hopes and goals has a positive effect on the university experience of successful students. On one hand, their major courses and the core curriculum begin to make sense; on the other, their goals inspire them to persist and give their best for a "success" they have well defined—learn graduate, improve, leave their mark.*

Fellow Students. "Like I'm going to be together with people like me, who want to improve. At times you think some people don't get along with you, but it's not because they're bad, but because they're different. People tell me I'm stand-offish, and I say, "You're nuts." But obviously I don't want to be with them, because all they do is waste time, and I want to do well."

Academic Elements. "I think in my case I want to apply what I learn in education, and I want to be a good teacher. So that makes me like my courses, make sense to me, because I know where I'm going to use them. I'm always thinking, where is this course going to help me? . . . I want to be a first rate executive, and I have to prepare myself for that. In the short run, I want to graduate with honors, all 9s and 10s."

Extracurricular Activities. "I didn't come to the university just to get a degree. I came to be educated, to grow, to exercise, to learn music, to find a mate, friends, colleagues, mentors, and clients. I came to prepare myself to help make a better Mexico. . . . I mean, if you have a goal, then everything you do makes sense, because you work to achieve your goal. I want to be an administrator. That's why I'm in the student government, because I know that's preparation. But if you don't have goals, then things

don't make sense, and that's especially true at school, because lots of things you have to do because they tell you to, and then you're just a herd goat."

Student Learning and Persistence. "You know, at times I get like tired, like confused, like I don't if I'm doing the right thing . . . but like I said, I take note of everything, then I review my goals and what I want to do and achieve in the future, and then everything makes sense and I go back to class with more enthusiasm, because I know why and for what I'm in all this."

Student Success. "Once I read Lee Iaccoca's book, and he says that to succeed you have to learn a lot, have high goals, and work hard, and I think he's right. I think if you want big things in life and you prepare yourself and work hard, then success comes by itself. First goals, then success."

Fellow Students affects: Academic Elements, Extracurricular Activities, Student Learning and Persistence, and Student Success. *Their classmates affect successful student's academic experience significantly, in part for the considerable amount of time they spend together, studying and doing homework. Their inner circle of friends are a source of inspiration and energy, while the friends in general—less successful—are a source of distraction, mediocrity, and camaraderie.*

Academic Elements. "My fellow students are an important element in my classes and academic activities, because I spend 90% of my time with them. We talk about homework, we study together, we do a heap of teamwork. I definitely could not do it without them. Just think, I have a really great group of friends, we're alike and unlike at the same time, but we all like to do our work well, and since we're all in it together, we get a lot of benefit from academics. . . Hey, but they affect you negatively, too, because like I told you already, there are lots of my friends who are just wasting time, cutting up, cheating—and that discourages you."

Extracurricular Activities. "I think it can affect you because your friends influence the activities you choose or they encourage you to do things, because in fact you sign up for lots of things because of the people who are there. . . I got into student government

because my friends encouraged me, and like I told you, that changed me forever. They made me see a whole bunch of things in myself and that I can use those good things to get ahead.”

Student Learning and Persistence. “Like, you can’t come to school and say, “I’m going to do it all by myself.” In many ways, it’s a team thing, a team project, with not only you but your parents, your profs, and your friends, because you study with them, do project with them, all that. In my group, we have a pact . . . that we’re all going to graduate in 2007, and so if somebody is screwing up, like we all tell him, “Hey, hang in there, we’re gonna help ya,” and I promise you, I’m going to stick with that pact. I’m going to keep my word.”

Student Success. “Your friends become like your colleagues, your partners in this venture, and if you want to do well, you need good friends. Just think, some people do super bad and drop out and everything; or they just take two or three courses, or like they’re never going to graduate, and that’s because they run around with people like that and the bad attitude is contagious.”

Academic Elements affects: Extracurricular Activities, Student Learning and Persistence, and Student Success. *Successful students say that a good academic experience lets them achieve significant learning which will be useful in their role as professionals and citizens. They say graduating from a recognized institution opens doors and helps them get good results.”*

Extracurricular Activities. “Well, I think when you get here you know that your number one objective is to graduate and get a degree, and you organize everything else around that, including extracurricular activities. . . In my case, I got involved in clubs and associations that have something to do with psychology, because I know that will complement my studies and help me.”

Student Learning and Persistence. “The courses and the degree are the heart of what you want to learn. If you do well in your courses, then the prize is you learned a lot, but the opposite can happen. . . In my case, the fact that they’re not very demanding affects

what I learn, because they are some really gut courses you can pass without trying, but then in your other courses you say, “Crap! I didn’t learn anything in there and I got a 10, but now I need that knowledge!”

Student Success. “I think if you get good teachers and good courses, you’ll do well, you’re going to graduate, and when you’re working in your own business, you’ll say, “Hey, they really got me ready!” It’s in class where you learn the truth of the UDEM motto, to make yourself an excellent professional and an extraordinary person. Because the fact of graduating from a university of the caliber of UDEM is going to help me a lot. It’s sort of like a letter of introduction, and I think the academic experience you get here is vital.”

Extracurricular Activities affects: Fellow Students, Student Learning and Persistence, and Student Success. *Successful students say that extracurricular activities help them transcend the academic and have a truly holistic formation.*

*Fellow Students*³. “Extracurricular activities affect your friends because they let you meet lots more people, generally who like the things you like, who are like your soul mates. I, for example, have good friends in class who I study with and everything, but I found my best friends in extracurricular activities.”

Student Learning and Persistence. “Like, you learn a lot in extracurricular activities, things that don’t have anything to do with your major or your profession, but things about life, about the world, like fine arts, sports, and aspects of faith. Extracurricular activities have been to my university experience what a happy friend is to a party, that is, I like my major and everything, but I really enjoy extracurricular activities. I love them, and that has helped push me forward, given me energy to press ahead. . . . In fact, if it weren’t for the exams and my own need to contribute to the general welfare, I could be a student all my life!”

Student Success. “Personally, I don’t think anybody can succeed or say he’s met his goals if he doesn’t have a really holistic formation. You can’t just come here and take courses, because the UDEM motto is a complete formation that educates you in every

³ The only conflicting relationship in the system (the only “recursion”).

aspect. For example, in academics, in interpersonal skills, in things of God, in sports. It's like a healthy mind in a healthy body and in everything about art and culture and all that."

Learning and Persistence affects: Student Success. *The statements of successful students reflect their conviction that that they more they learn and the harder they try in school, the better their chances for academic success.*

Student Success. "Yes, like I think the more I learn and the harder I work to graduate, the more I'll succeed, not only as a student but also in life. It's like a little chain, if I learn more, I'll graduate with good grades. I can't hope to graduate well if I don't try. I promise you, success doesn't just happen. I mean, unless you're lucky enough to win the lottery, you don't succeed as a student with dumb luck. You have to learn and try. . . . What did you call it? Oh, yeah. You have to persist, persist. Sounds cool."

Student Success, affects: (No factors). *Student success is the result of the influence of all the factors successful students identified. Though some say success affects other factors (habits, goals), success is a result, clearly a result, and the other factors are requirements of it.*

No factors affected. "My success as a student is a result, it's what I want to accomplish. If I succeed it's because other things made that possible. I know that success doesn't come on its own but from work, from the effort I make to study, from my parents' help, from what my profs teach me."

Seniors: relationships among the factors that affect engagement

Senior student's perceptions of how the factors that affect their engagement are related are shown in Figure 4.4. Appendix B shows the data used to prepare it. It should be read from left to right, as in "Important people affect my personal qualities, which in turn influence my experience in the academic program . . . which finally determines my success as a student."

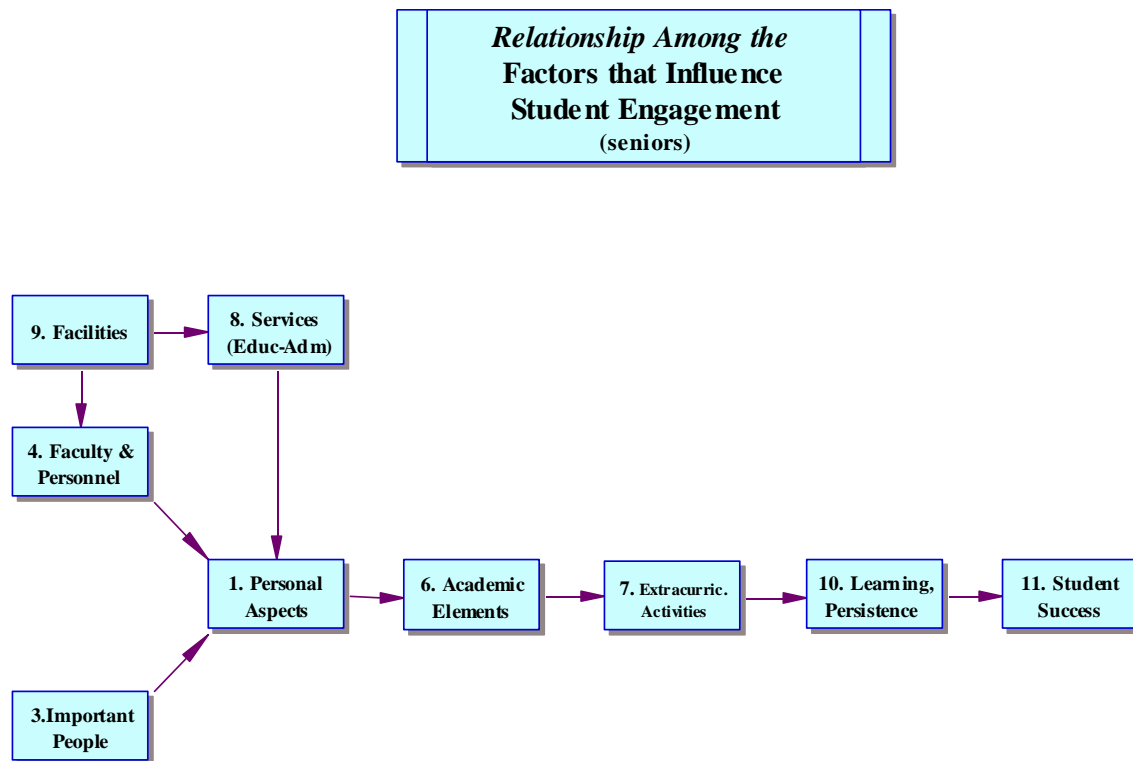


Figure 4.4 Relationships Among Factors: Seniors

Seniors: perceptions of the relationships among the factors

The narrative that explains the relations among the factors in the system follows. When students said, “Factor Y affects factor X,” they were asked, “How?” Their answers were used to generate the narrative.

IQA procedures revealed that there are 30 direct relations within the factors in the seniors system; those relations cause about 80% of the system’s variation and were used to create the SID. The SID, however, shows only 9 of those direct relations, in the form of arrows. The other 21 are not seen, because they are redundant, but they are there!

The 30 relations are described below. For each factor, the narrative shows 1) which factors affect, with direct arrows or via other factors, and 2) the relevant student perceptions which describe the relation. Relations are presented as they appear from left to right in the SID; that is, beginning with the factors which most influence the system (drivers) and ending with the results (outcomes). Texts in quotation marks are participant comments.

Physical Plant affects: Faculty and Staff, Services, Personal Aspects, Academic Elements, Extracurricular Activities, Learning and Persistence, and Student Success. *In their comments students say the physical plant is a factor that influences their academic experience, albeit not the most important. The level of the available facilities influences the faculty’s work and students’ academic and extracurricular activities, and therefore student learning and success.*

Faculty and Staff. “UDEM’s physical plant limits the faculty. . . . For example, if they don’t have the software or the lab equipment they need, they can’t teach the way they want. I see that we lack some important things, like a good gym. We have to use other gyms, and that affects the instructor because you lose a lot of time just coming and going. The physical plant affects the faculty, of course. Just think, if the room is well lit, quiet, comfortable, and equipped, nobody really notices, and the teacher can teach the way he wants and the students learn a lot. But if the room is noisy or hot or lacks equipment, well, everybody notices, because it’s a pain and the class doesn’t reach its level. It’s like walking with a pebble in your shoe. It’s always a bother!”

Services. “Because the better your facilities are, the better services you can offer, like the library, computers, the cafeteria. I think it’s really hard to offer good services without the right facilities; like, it’s a requirement for good service. For example, a library doesn’t work unless there are a bunch, a great big bunch of places to sit down and study in silence without somebody bothering you.”

Personal Aspects. “It’s not that I changed for the buildings, that I am what I am because of the buildings, nothing like that. I can study in the stadium with a soccer game going on if that was the only place left in the world; but you have to adjust some of your habits according to what the institution has to offer, like: places to study, eat, or exercise. The facilities affect me, but since I’m from out of town and live a long way off, the campus becomes my home, and I want the bathrooms, the cafeteria, the library always to be in the best condition possible. Fact is, the physical plant does affect you, because it’s not the same thing to come to a clean, green, pretty, lively place as to one that’s not like that. . . . Or like I was telling you, you leave home in a good mood, and when you are about one mile away from campus, you suddenly remember, “Oh, crap! The parking lots!” And then the next thirty minutes are the pits, I mean, the worst part of the day, finding a place, getting mad, getting muddy, running like a madman so they don’t close the door on you, and after you get to class you can’t unload those thirty minutes like taking off a shirt.”

Academic Elements. “I think the plant affects the academic elements, because the classes, the laboratories, and the professional practices can’t take place if you don’t have the right spaces. For example, you need good classrooms, fully equipped without so much heat and noise, especially noise, and with comfortable seats and equipment that works. In

my major, labs are very important, so if you have them or not affects the way classes and academic questions are handled.”

Extracurricular Activities. “The physical plant is very important for doing extracurricular activities well. My sister was here a while back. She graduated some years ago, and she was surprised to see the playing fields, the dance studio, the theater, and she said that when she was here, they didn’t have any of that and that I should take part in everything I could. This is a full-time school, and that means you spend the whole day here. For that you need excellent facilities, because you have to play soccer, rest, go for advising, take a bath, and I can see that in all that we’re not making the grade.”

Learning and Persistence. “Well if the facilities are good, then you study with more enjoyment, you’re going to be more positive, and that makes you study more and you try and try to get ahead to meet the goals you’ve got planned. In my major, there aren’t many laboratories and they’re not well equipped. That has affected what I’ve learned, so I don’t know much about lathes or welding or time and motion or electricity, because we don’t have labs. Once the prof took us to the lab at the school where he studied, the state university, and it was really neat.”

Student Success. “[The physical plant], I see it as a requirement, something you need so when you finish you can say, “Okay, I learned a lot, I made it.” I may not compare with something as important as good faculty, like I said a while ago, but if you don’t have good quality facilities, it’s going to affect you, one way or the other. It’s like a good meal where the entrée is the important part, but if you don’t have a good wine, it’s not the same. That’s the same with the buildings, the equipment, the playing fields, all that.”

Important People affects: Personal Aspects, Academic Elements, Extracurricular Activities, Learning and Persistence, and Student Success. *Significant people, particularly parents, affect most elements in the system, with the exception of faculty and institutional resources. They strongly affect student habits, personal qualities, goals, and desire for improvement. On the other hand, the family, especially its support for the*

student, significantly affects the intensity of students' university experience and its outcomes.

Personal Aspects. “My family inculcated the values, habits, and attitudes I have, and they are important in my academic performance. . . Since grade school, junior high, and high school, I’ve always been super responsible, not only studying, but I pay attention in class, I take notes for exams, and I study. Nobody has to make me. That’s the way I am. That’s what I guess they’ve [my parents] drilled into me since I was a little girl, and that’s the way I am. . . I hear a lot around here about how if you’re going to get an education, your parents have to dedicate a lot of time to you, but you need more than that, you need love and attention, too; when they’re with you, they really need to be with you, not looking at the newspaper or talking on the phone; and when you screw up and get depressed, they have to understand you and support you and love you; and my parents are great about that; I promise you, they’ve always given me lots of their time, but also their attention and their love. How do you pay that back?”

Academic Elements. “My parents really like the UDEM experience, and I think that affects me positively, because I know that I can count on their agreement and support. Like, my daddy always insists that school is the most important thing, that I should enjoy it and take advantage of it, and that keeps me on the right road. He never lets go. Like, in those families where they’re always carrying on and don’t support you or are always fighting, you’re not going to study well. Definitely, if you have a family that is stable and supports you, doing your schoolwork is going to be a lot easier and you’ll enjoy doing it, beside. Obviously the family affects the academic elements, and I think the key word is *support*. That is, they’re not going to do it for you, but if they support you, things will work out.”

Extracurricular Activities. “Your family affects cocurricular activities, because they encourage you to get into them, they help you choose, if only with the simple question, “How did it go?” That means it’s important to them and they’re paying attention. My best days at school are when my parents come to a play or a concert, and they like it. That’s really nice for me. And I see other parents watching their kids playing soccer, and that must be really neat for them.”

Learning and Persistence. “I think the family is key to good learning, when they support you and help you study. I think that by now I can study by myself, not like when I was a brat and they really taught me to study, when you got no teevee if you didn’t do your homework. . . . Now I study alone, so they taught me well, but I still have their support, they’re aware of me, of whether I’m advancing and learning. But the most important thing about the family is, more than helping you learn, is helping you stick with it, not drop out, and I swear, that’s super important. There are days when I say “I’m not going on with this,” but my family keeps me working. As long as I can remember, my daddy gives me the “okay” sign, the thumbs up—when he left me at school, when I played soccer, when I go out with my friends. I know it comes from his heart, and it has a positive effect. It did when I was a boy and still does.”

Student Success. “The family affects how you learn and graduate and take advantage of school, definitely. Although there are lots of cases where people manage without their family or with a family that doesn’t support them, which is worse, I think it’s a lot easier to do with a family behind you. Because is like someone you’re committed to. You don’t let them down, because you’ve got a commitment to keep, and finally you figure out that the energy that moves you comes in part from wanting to live up to your family.”

Faculty and Staff affects: Personal Aspects, Academic Elements, Extracurricular Activities, Learning and Persistence, and Student Success. *The faculty is an important driver in the system of factors which affect successful students’ engagement. They have considerable influence over student personal aspects and are the element which more than any other determines the quality of curricular and extra-curricular experiences. Therefore students consider them key when evaluating their experiences at and after the university.”*

Personal Aspects. “Because we’re here in school to be educated, and that work we entrust to the faculty, who have the responsibility of working on your best personal aspects, like those you mention—knowing how to study, being responsible, being a good citizen,

having high goals. I recall very well the moments that have made me who I am and, how can I tell you, I think I'm a winner, a success. In those moments there are almost always teachers, like the one who told me I could give the graduation speech out of prep school, and they have helped me develop my skills and have a winning attitude. . . . Of course they affect who you are! I really believe the faculty are examples of values, like the Marists say, and so I admire teachers who are proper, courteous, get there on time, have a vocation—because that affects you.”

Academic Elements. “Well, yes, I was the one at the brainstorming session who wrote “teachers” on the card in big letters with light bulbs and underlined and arrows and all. I was serious, because I believe the faculty really affects your studies. If I compare the faculty to other things in school, nothing is more evident than they are, not the library, not the program director, nothing, and that’s why I say the faculty makes the difference in your academic experience. . . . Why? Look, generally in 90% of the cases, the teacher is the difference between a good course and a bad one. If you like it and learn, it’s the prof. If you don’t get it and don’t learn, it’s the prof. Of course, you do your part.”

Extracurricular Activities. “Because the faculty make you take part in lots of activities. In my case, my taste for music was the product of a teacher who asked me why I always signed up for soccer. He said I should try everything, and if I didn’t like it, I could come back to soccer. When I told him I didn’t have a guitar, he lent me his! And now I love music. Nobody at my house likes, so if it hadn’t been for him I could have gone to my grave without learning the guitar. . . . And you should see the fun we have giving serenades! It’s like I’m telling you, the main thing in a course is the teacher. If he likes to teach and knows what he’s teaching, it doesn’t matter if it’s yoga or personal development or family development or student government, it’ll help you.”

Learning and Persistence. “So look . . . teachers, they affect learning . . . because for me, my desire to learn depends above all on the teacher’s enthusiasm. Not that I don’t accept my responsibility, I’m sure aware that I’m who has to study, but, boy! It makes a difference if you get an enthusiastic teacher who likes teaching people, who likes the course, because he makes you learn a lot. And when you get uninspired teachers, it affects you a lot, and you want to say to them, “Hey, Bub, find another job!” Like, I feel committed to my teachers in the sense that they want to see me graduate. . . . One of them several semesters back told me that when I was ready for my thesis I should come to him

because he'd like to advise me. And I went and he said he'd sure be my advisor the next semester. That kind of personal attention affects you, for better for worse."

Student Success. "Because what you're looking for is to get a degree and prepare yourself for life, not just to be one more employee, so the teachers have a very important part in that. . . . Like, if I were a boxer who wants to be world champ, and I say, who's going to help me most? And, well, it's the trainer, and here at school it's the faculty."

Educational and Administrative Services affects: Personal Aspects, Learning and Persistence, and Student Success. *Successful students say the services are an important element in their university experience, particularly because they affect their study habits and because they facilitate—or complicate—their desire to get involved in academic or extracurricular activities.*

Personal Aspects. "Well, the better the services are, the more I'm going to develop as a person. Personally, the library affects me, because like I'm telling you, I spend most of my time there when I'm not in class, so for me it's important to find a place in the computers, find somewhere to study, find lots of books. Because to have a good schedule and get the teachers you know are good affects the way you arrange your schedule and what you're going to learn from those good teachers."

Learning and Persistence. "Just because they're tools that help you learn more, like resources it's good to have here."

Student Success. "I think that for a student to develop well, he has to have many things in hand and has to make an effort. There's no use saying, 'We don't have any of that, and I don't know what to do about it.' That way services affect your success as a student. In my case, I think services should always be good so you don't have problems with them, so you can concentrate on what you're really here to do, which is study. That's why in the library, in the Information Center, in the cafeteria, in the computer rooms, you shouldn't have problems. But if you got to the library and there aren't enough books or nowhere to study, or you go to the Information Center and lose a whole bunch of time, and you ask yourself, 'Say, did I come here to study or to deal with all these hassles?'"

Personal Aspects affects: Academic Elements, Extracurricular Activities, Learning and Persistence, and Student Success. *Students' comments clearly reflect their conviction that they are in charge of having a satisfactory, productive university experience. Other factors affect them, but they themselves are the biggest influence. Their learning and success as students are determined in large measure by who they are, how they behave, and their personal situation.*

Academic Elements. “Well, I think who you are as a person determines or affects what goes on in your academic experience. I think the attitude you have toward your degree and the day is important. Personally my attitude is, “I started this degree. I’m going to get involved, I’m going to use everything, I’m going to do okay.” Because if you’re organized and responsible, then things are going to go well for you and vice versa. To do all this, what I’ve done is be very organized and disciplined. I’m always focused on short term goals, and I try to reach them always to the max and not leave them half finished. I always finish what I start. It’s just that I believe you affect your major. For example, if you like your major, then you’re probably going to get a lot out of it; but if you don’t like it, it’s going to be a Calvary. . . . I mean, *if* you graduate! Well, first, I’m really interested in what I’m studying. My major fascinates me, so I’m motivated.”

Extracurricular Activities. “I think your habits and personal aspects affect your extracurricular activities, because if you’re a person who likes to be into lots of things, you’re interested in taking part and you give it the necessary time, then you’re going to do well there, like when you’re in student government or doing your Social Service; otherwise I get mad when I see so many people with no motivation, don’t you see? Like apathy. They just do the least possible to get by the cocurricular activities without seeing the richness there.”

Learning and Persistence. “The Big I is the main one for learning, because you’re the one who came here to learn and get ahead of not. If you know what you want and know how to get it, or like, working at it, then that will happen. You’ll learn and you’ll stick with it, but if not you won’t learn and probably won’t graduate. Nobody in his right

mind would say you can improve learning directly, because learning is a consequence, the product of something, and that something is in part what you do as a student, your effort, your discipline.”

Student Success. “Imagine, I always have thought we shouldn’t blame people but that just about everything depends on you yourself. My mama says that bad or sad things only happen to dumb bunnies, and I agree. Or like if I want to succeed as a student and achieve my goals and all that I’ve told you about, well it just about depends on me. Obviously lots of things can happen along the way, but generally, after all the falderal, it depends on me, so I believe personal aspects decide how much success you have.”

Academic Elements affects: Extracurricular Activities, Learning and Persistence, and Student Success. *A good experience of the academic program and the related aspects makes a good experience with extracurricular activities easier. On the other hand, they are an important ingredient of significant learning, both in the major and in general, an important ingredient of personal and professional success.*

Extracurricular Activities. “Although extracurricular activities are very important, I see them as a complement to the academic, of my major itself. So among my priorities, my major and my courses are first and then participation in cocurricular courses, especially when we’re talking about time, the time I have to do all that in.”

Learning and Persistence. “It’s that, if you’re going to learn and really get all the goody out of this, all your academics have to be in good order, or like, your degree has to be well designed, the courses have to be the kind that will really be useful, and the courses have to be well taught. Generally I like the UDEM system. It’s one of the things I value most about the university, because the program is complete and very flexible. Let’s say you leave with a broad vision, as well as distinctive traits, because you can choose from various areas. Or like if we’re talking about psychology, you really learn about everything, and you specialize in something, and at other schools they really specialize in just one area. The courses in my major are pretty interesting, well sequenced, and they have a good practical component. I think there come three or four moments in the program where you

really realize whether you're learning or not, and I'm in one of those right now, professional practice and thesis. It's like, if you have courses where the teacher doesn't know how to teach or dumbs the class down for the mediocre students, it doesn't matter if you get a 10, you still didn't learn anything. I'm surprised how many of my courses look just alike, and you just do them on auto-pilot. . . . The teacher lectures, gives you some little piddling assignment—and then doesn't grade it—lots of team presentations, and I hear my brother say where he studies there are courses where you read a whole lot and do just one paper a semester about the size of a thesis; or courses where there are no exams and all the presentations are individual.”

Student Success. “A good academic experience really gets you ready to develop well throughout life, and that leads to success in everything you undertake.”

Extracurricular Activities affects: Learning and Persistence, and Student Success.

Extracurricular activities give students a chance at a truly holistic formation—developing support networks, learning things outside their major, developing personal skills, and taking part in cultural activities, sports, pastoral work, all of which contribute to significant learning and the development of personal success.

Learning and Persistence. “The cocurricular stuff definitely affects your learning. Because in the major, they teach you about the major, but here they teach you things that have to do with other aspects of life: general culture, the balance in everything, things like how to get along with others and be a leader and more. Extracurricular activities let you develop a group of friends who, I think, are committed to you and help you, and you get ahead. That makes you keep on working to get ahead and graduate.”

Student Success. “Like I was telling you, extracurricular events affect your success, because they're part of your holistic formation, and to develop that way you have to take part meaningfully in general activities. Because the things you learn in extracurricular activities help you a lot, they complete you. In my case, when I was talking about being in FEUDEM [student government] a minute ago, that has been my best experience in the

university, and I know it's going to help me, that it is helping me achieve the success I'm looking for."

Learning and Persistence affects: Student Success. *Successful students are convinced that having significant learning experiences and sticking to their studies are requirements for becoming successful people.*

Student Success. "Well, those of us who are studying education are convinced that student success is measured two very simple ways: how much you learn and whether you pass from year to year. In that case, what you learn and your persistence affect how much success you'll have in school."

Student Success affects: (No factors). *Almost unanimously, successful students indicate that their success in the university—and later—is the result of the "right" combination of the other factors in the system.*

No factors affected. "Like my teacher said, "There isn't a little button to push to increase or decrease the success you'll have. You have to adjust the processes which bring on success." So I believe that success is a result, and if I want someone to be more successful, I can't tell him, "Hey, be more successful!" but rather, "Hey, get better teachers and don't go out drinking during the week and ask your mommy and daddy to take care of you." That's the way I see it, for sure."

CHAPTER FIVE

INTERPRETATIONS AND RECOMMENDATIONS

Overview

This chapter analyzes and discusses the results of the research. First is a comparison of the results from freshmen and seniors to determine if they differ significantly from the point of view of student engagement. A description of the Matrix of Student Engagement, the tool used to explain why engaged students are the way they are, follows. Then comes the discussion and interpretation of results, centered on engaged students: why are they the way they are, what factors affect them, how do they relate to the institution where they study? From that discussion arises a general model of student engagement. Finally, there are recommendations for the site of the study, suggestions for further research, and conclusions.

Comparisons of Freshmen and Seniors

Both freshmen and seniors answered the study's five questions, and Chapter 4 presents the results for each group separately. This section compares the results to determine what significant differences, if any, exist.

Comparison: Factors that Affect Student Engagement

The study's first question is related to the factors that affect the level of student engagement. Table 5.1 in the next page shows the factors identified by freshmen and by seniors and was created using the information in Tables 4.2 and 4.3. It shows that the factors which affect the level of commitment of freshmen are practically the same as those seniors identified.

A detailed analysis of the table make several observations possible. The most evident difference is that what one group included under a two factors, the other group included as one. The seniors called it "Personal Aspects" with the sub-factor "Hopes and Goals." The freshmen separated them into two principal factors, "Personal Aspects" and "Hopes and Goals." Both groups said those factors "influence" their level of engagement. The difference is more cosmetic than profound.

Freshmen used the word "parents," whereas seniors mention only "family." Both groups, however, answered in terms of their parents when asked about "your family," which suggests parents are a relevant factor for both.

The senior list includes some factors appropriate to their more advanced progress toward a degree: professional practices, the Final Evaluation Project (and thesis), Social Service, and student exchanges. The freshmen understandably mentioned none of them, since those experiences are not on their "radar" yet.

Despite that distinction, the slight differences which appear on the table vanish at the third or fourth level of resolution, the fourth level being all the cards generated in the focus group sessions.

In conclusion: the factors that influence the level of engagement of successful students are the same when they enter the university as they are when they graduate.

FACTORS THAT AFFECT STUDENT ENGAGEMENT Comparison – Freshmen vs Seniors			
Freshmen		Seniors	
Factors and Sub-factors Identified		Factors and Sub-factors Identified	
1	Personal Aspects Personal Values - Personal Qualities and Attitudes - Habits and Skills - Personal Situation - Behaviors as Student	1	Personal Aspects Interests - Attitudes - Habits and Skills - Personal Situation -
2	Personal Hopes and Goals Aspirations - Goals - Commitments		Goals, Expectations and Commitments
3	Relevant People Parents – Family - Friends and boy/girl friend – Others	3	Important People Family – Friends– Others
5 ⁴	Fellow Students Fellow students		Fellow Students
4	Faculty Faculty - Program Head -Leaders (officials)	4	Faculty and Personnel Faculty - Program Head - Leaders (officials) - Others
6	Academic Program (major) Major and Courses - Assignments, Exams, and Rigor - Class Schedule – Connectedness - Institutional Issues - Other	6	Academic Elements Design of the Major- Academic Rigor – Classes- Culminating Experiences – Assignments - Big Sections - Other
7	Extracurricular Activities and Scholarships Extracurricular Activities – Scholarships	7	Extracurricular Activities Courses and Activities - Social Service - Student Groups– Events - Student Exchange - Other
8	Services and Infrastructure Library — Classrooms – Other Physical plant – Parking Lot IT Services	8	Educational and Administrative Services Library – Cafeteria – Scholarships - Other
		9	Physical Plant Physical plant - Parking Lots – Computer Services - Other

Table 5.1 Comparison: Factors that Influence Engagement

⁴ The order of this factor was changed to facilitate comparison, though the number remains the same.

Comparison: Student's Perceptions of the Factors that Affect Engagement

The study's second question explores student perceptions of the factors they identified. Though specific comparisons and interpretations appear farther along, at this point I will say only that the perceptions of both freshmen and seniors of the factors that affect their performance are practically the same. To create the freshman narrative, 35 sub-themes (among 8 factors) were identified, while for seniors, the narrative identifies 35 sub-themes (among 7 factors). The themes and the comments are surprisingly similar in both groups. There follows a small extract of comments which could well have come from either group:

“The habits I have help me succeed . . . the goals I have for the future . . . the support I get from my parents . . . the way good teachers are and how they affect me . . . because my little group is mostly good students, and most students are mediocre or bad . . . how much I love and enjoy my major . . . I take part in countless extracurricular activities . . . the influence of services like the library and the computer labs . . . the influence of the physical plant, especially the parking lots.”

In conclusion: successful students perceive the factors that decide how committed and involved they are with their studies, the same way right after they enroll and when they are about to graduate.

Comparison: Relative Influence of Factors

The study's third question explored the relative influence of the factors on the level of engagement. Figure 5.1 shows the opinions of both groups. In the graph, the higher the factor appears, the greater its influence on engagement, according to the students.

The results show that the relative influence of the 9 factors on the level of engagement is the same for freshmen and seniors without no significant differences. In other words, all the students identified the same factors as most or least influential.

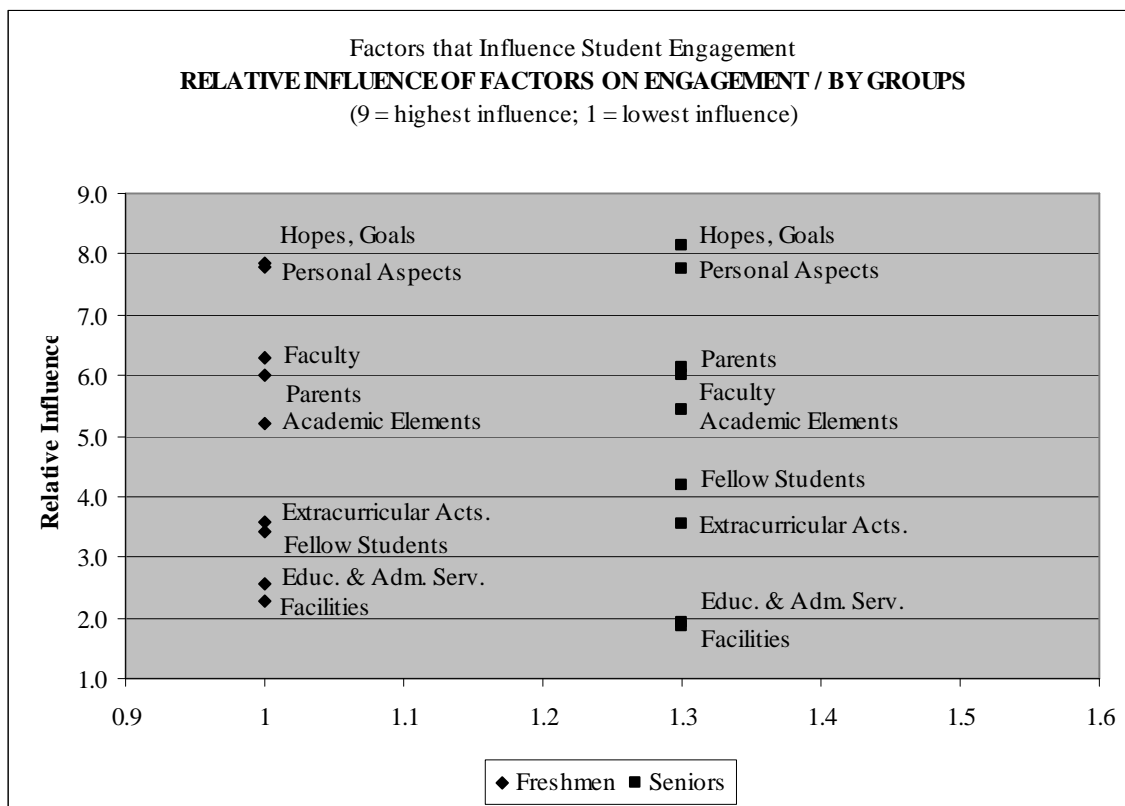


Figure 5.1 Comparison: Relative Influence of Factors

The slight variations in the results of the average relative influence can be ignored in the whole panorama. The similarities in the opinions of both groups is not limited to their ordering the factors almost the same way from most to least important, but they also assign almost the same numerical values. The difference in points between the most and least influential factors is both dramatic and almost the same in both groups, as follows: Freshmen and seniors assigned to the factor with greatest relative influence, Hopes and Goals (Factor 2), an average influence value of 7.9 and 8.1 respectively, out of a possible 9; and to the factor with lowest relative influence, Physical Plant (Factor 9), a value of 2.3 and 1.9 respectively, out of a possible 1.

One difference the graph reveals is that seniors assigned slightly greater relative influence to Fellow Students (#5) and Extracurricular Activities (#7) and slightly less relative importance to Services (#8) and Physical Plant (#9), than did the freshmen.

In conclusion: when successful students consider the factors that influence their commitment and involvement with their studies, they assign the same influence—high, medium, low—when they enter the university and when they graduate.

Comparison: Assessment of Factors Performance

The study's fourth question identified the performance level of the factors. Figure 5.2 shows a comparison of student assessment of each of the 9 factors, freshmen on one side, seniors on the other. The farther to the right the factor is, the better its actual performance, according to the students.

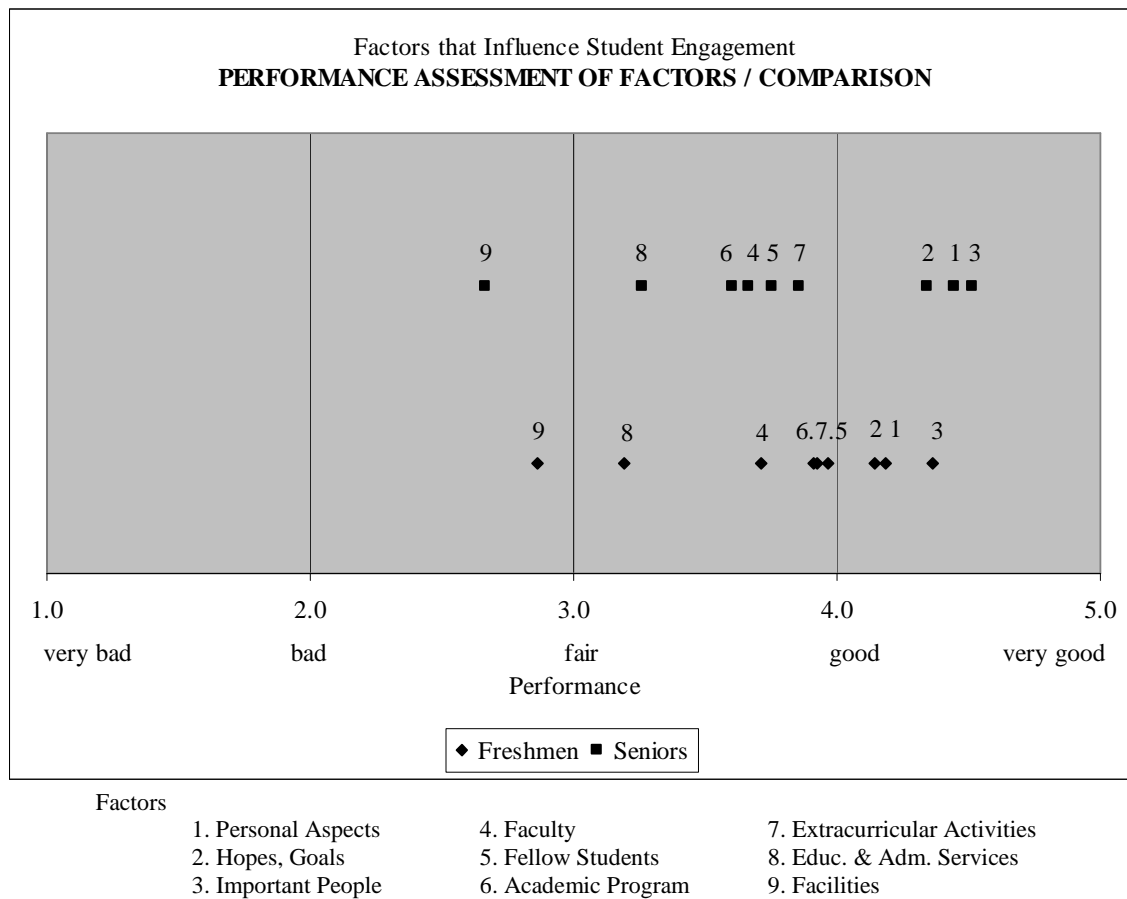


Figure 5.2 Comparison: Assessment of Factors Performance

The results for freshmen and seniors are very similar. Both groups ordered the factors from greatest to least performance in almost identical way (with variations of only

one place among 9 possible), and the results of average performance by factor show no significant differences (the greatest difference in the same factor between the two groups was 0.3, a minimal variance in a possible 4.0). Likewise, the difference or gap in the result of average performance between the factors rated highest and lowest in each group was very similar—1.5 for the freshmen and 1.8 for the seniors of a possible maximum of 4.0.

Both groups found: Important People (#3) and their positive influence as the factor with best performance; Personal Aspects (#1) like good attitude, habits, discipline, next; and third with best performance, Hopes and Personal Goals (#2). All three were ranked between *Good* and *Very Good*. For both groups, the lowest performing factor was Physical Plant (#9), functionality and appearance; the next lowest was Educational and Administrative Services (#8) and the quality of service. Both factors had middling results around *Fair*.

Compared to the freshmen, seniors ranked Hopes and Goals (#2), Personal Aspects (#1), and Important People (#3) slightly higher; and Extracurricular Activities (#7), Academic Program (#6), Fellow Students (#5), and Physical Plant (#9) slightly lower. They rank Faculty (#4) and Services (#8) the same.

In conclusion: freshmen and seniors rank the actual performance of the factors that influence their engagement much the same.

Comparison: Relationship Among Factors

The study's fifth and last question explored the way the factors that affect student engagement relate to each other. Figure 5.3 in the next page shows the Systems Influence Diagrams (SIDs) created from the perceptions of freshmen and seniors of their opinion of how the factors relate to each other.

The SIDs in the graph were originally presented in Figures 4.3 and 4.4 and have been slightly modified here to facilitate comparison. The similarity between them is evident. The topography, the physical arrangement and order of the factors, is almost identical. The significant similarities and the slight differences between the two SIDs are discussed below.

The factors freshmen and seniors identified are not exactly the same. The former identified 8 and the latter 7; but as has been said, the factors of both groups are nearly the same in terms of content, and consequently comparing them does not generate "noise."

The greatest similarity between the two diagrams is the "sequence" of the factors which is the same for all practical purposes. For both, the drive Physical Plant (#8,9) affects Faculty (#4). Faculty (#4) and Important People (#3) are the other principal drivers of the system. Then come Personal Aspects (#1) and Goals (#2). Recall that, for freshmen, Factors 1 and 2 are included in the seniors' Factor 1. Farther along appear Academic Program (#6) and Extracurricular Activities (#7). Finally, Learning and Persistence (#10) and Student Success (#11) are the system's output.

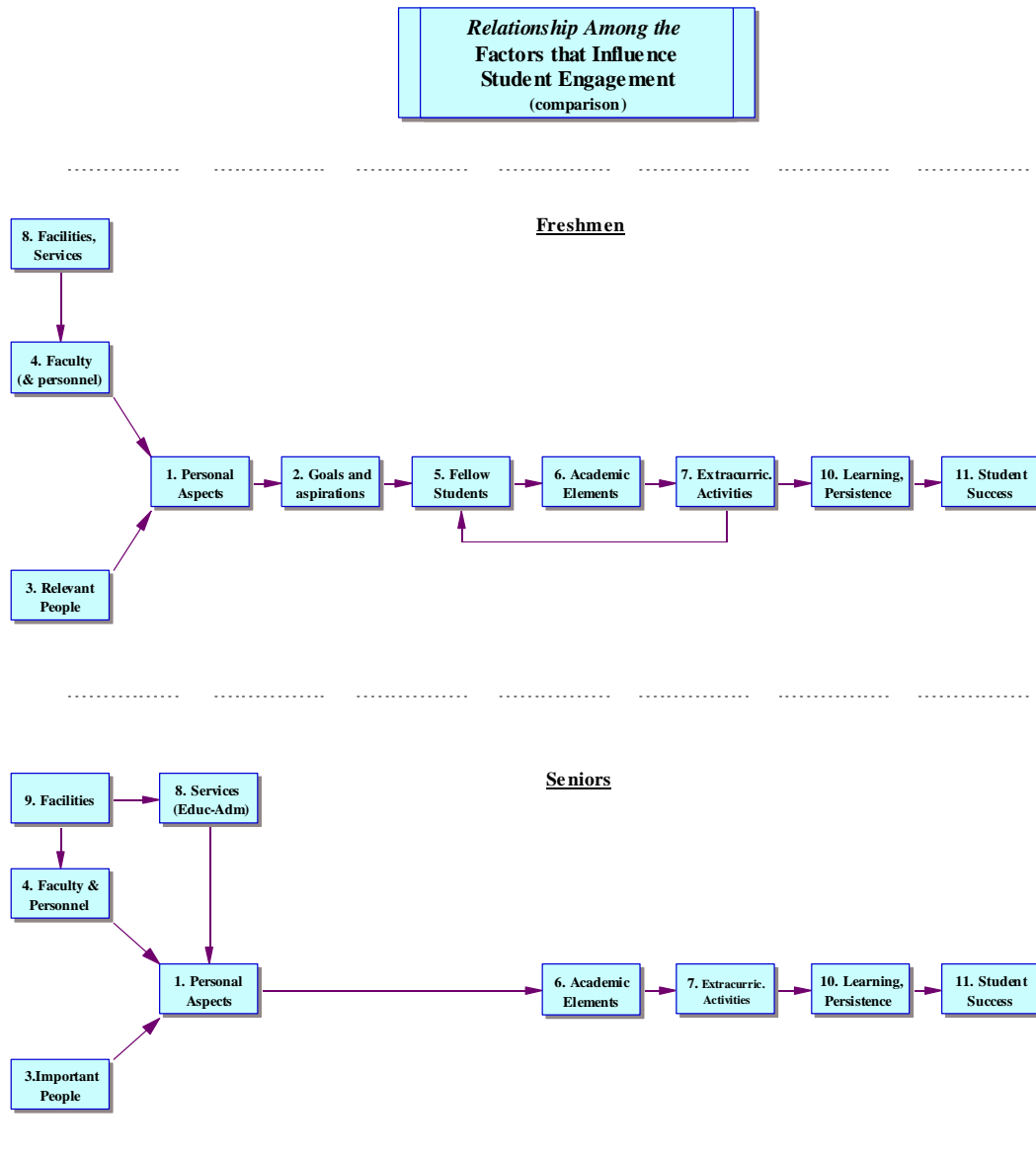


Figure 5.3 Comparison: Relationship Among Factors

There are differences between the diagrams. For freshmen, Fellow Students (#5), comes after Personal Aspects (#1), and Goals (#2), while the seniors, who do not have a Fellow Students factor, located that sub-factor before Personal Aspects (#1) since it is part of their Factor Important People (#3). The reason is that seniors think in that case of

their parents, not their classmates: “I am who I am from the influence of my parents, not my friends.” With that clarification, this difference between freshmen and seniors becomes insignificant.

Factor 8, Services and Physical Plant among freshmen is divided into two among seniors, Education and Administrative Services (#8) and Physical Plant (#9). Still, in both SIDs those factors appear in the same place, and again there is no significant difference.

Finally, in the freshman SID there is a relation (arrow) known as “recursion” or recurring relation according to which Extracurricular Activities (#7) affects Fellow Students (#5), a relation that does not occur in the senior diagram. The difference is not significant because, as will be shown later, if the percentage of relations considered to create the system is raised from the original 80%, other recursions appear. That particular relation is among those with the least “power” in the system.

In conclusion: both freshmen and seniors ready to graduate believe the factors that affect their level of engagement are related among themselves the same way.

Matrix of Engagement Level

Highly engaged students are special people distinguished not only by the way they progress in their studies but also by the way they achieve and enjoy personal and professional success. Trying to emulate their experience, some of the questions which arise most frequently in the higher education community are: What can we do to help college students be more successful? To reduce the drop out rate? (Astin, 1975; Kuh, 2001; Noel and Levitz, 1999; O'Banion, 1997; Pascarella and Terenzini, 1991; Roueche, 1997; Tinto, 1987).

The SIDs generated from the perceptions of the highly engaged students who participated in this study allow participation in that discussion. But first follows further analysis of the data collected.

The 9 factors that influence the level of student engagement were evaluated for their relative influence and also for their level of performance. If each variable had only two possible values, "high" and "low," we could combine the results by factor, *e.g.* factor with high influence and low performance; factor with low influence and low performance, *etc.*

Combining the two variables, relative influence and performance, permits the creation of a matrix called the "Matrix of Engagement Level" (MEL) on which all the factors in the study (9 principal and 52 secondary) may be placed.

Matrix of Engagement Level: General Model

The general model for the MEL is in Figure 5.4. It has four quadrants created by combining the possible values of the two variables. With the factors that affect engagement placed on the matrix, a person or an institution can discern what actions to take regarding each factor. The four quadrants are given specific names to facilitate use.

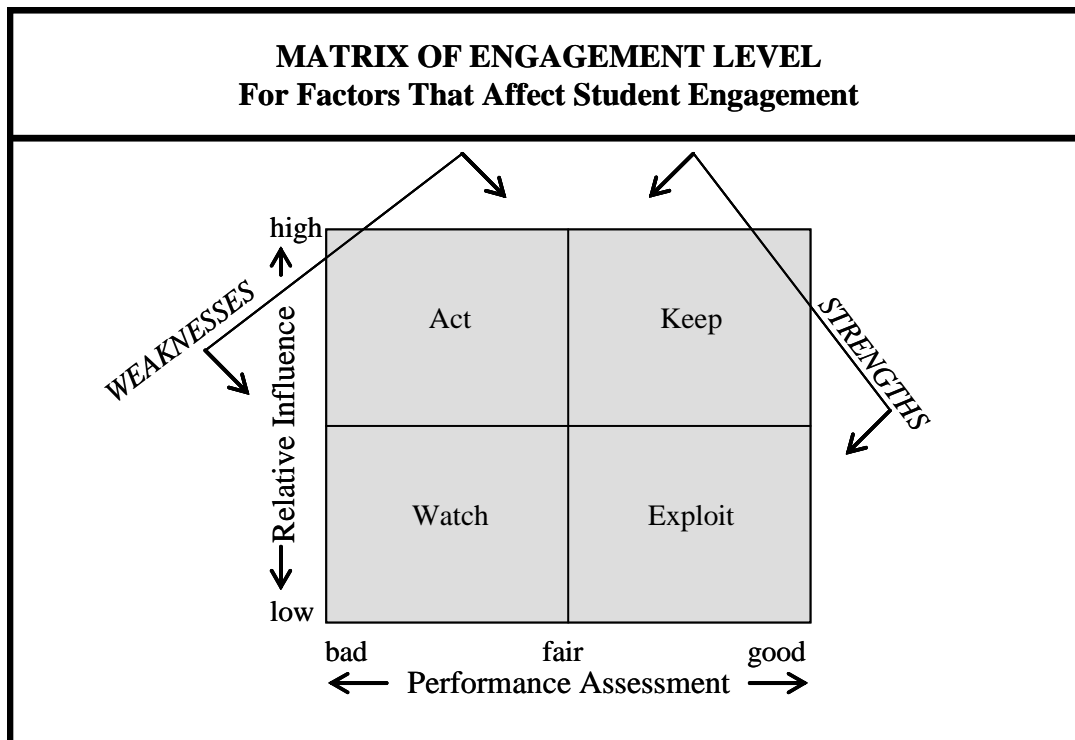


Figure 5.4 Matrix of Engagement Level: Model

The factors with high influence on engagement and high performance are in the Keep quadrant and show the strength of a person or an institution and should be maintained as they are. Factors with high influence and low performance are in the Act quadrant and should be acted on promptly to improve performance or offset possible negative effects. Factors with low influence and low performance are in the Watch

quadrant and should be watched to prevent their relative influence migrating to the Act quadrant and to decide if the performance can be improved. In universities *unimportant* factors, such as the number of chairs in the cafeteria, commonly become important overnight after a walk-out or a comment from some highly placed functionary. Finally, factors with low influence and good performance are in the Exploit quadrant, which means the person or institution should see if advantage can be gained from those factors' good status by publicizing the level of performance, raising the level of influence, or conserving resources.

Another way a person or an institution can determine which factors are strengths to be maintained or improved and which are weaknesses to be bettered is by determining the real and marginal level of contribution of each sub-factor to "total" engagement. Generally speaking, the factors which contribute most to engagement are the person's or the institution's strengths, and the factors with greatest marginal contribution are weaknesses.

Proceeding from that formula, the factor with greatest contribution to engagement (the greatest strength) would have the highest influence and performance possible (upper right hand corner of the matrix), and the factor with the least real contribution would have the lowest possible influence and performance (opposite corner). Conversely, the factor with greatest marginal contribution (the greatest weakness) would have the greatest possible influence and worst possible performance (upper left hand corner), and the factor with least marginal contribution would have the least influence and best performance possible (opposite corner).

The lines called “Strengths” and “Weaknesses” in Figure 5.4 represent those assumptions. Following each of those lines in the direction indicated from its position in the figure, the factors which are above the line are the system’s strengths or weaknesses, according to each case. The first factor to appear on the “Strengths” line is the system’s greatest strength, while the last to appear is the least strength (or that which contributes least to engagement). Similarly, the first factor that appears on the “Weaknesses” line is the system’s greatest weakness, and the last to appear is its least weakness (or that which can do the least to increase engagement).

Matrix of Engagement Level: Factors

For purposes of this study, the 9 factors identified were evaluated for both relative influence and performance. Figure 5.5 shows the Matrix of Student Engagement for the highly engaged students who participated in the study. There are no separate graphs for the results of freshmen and seniors, since their results are practically the same.

The graph clearly shows that factors with high influence on the level of engagement also have high performance, at least “Good” in all cases. For example, the factor which most influences the students, Hopes and Goals (#2), is actually between “Good” and “Very Good.” The briefest glance at the participants’ perceptions of those factors confirms that result: an important factor with high performance.

“Having hopes and goals in your life is important . . . It’s the motor! . . . What is my goal? . . . I know where I’m going . . . to finish my degree and graduate . . . enjoy being a student . . . graduate work later . . . get a good job and succeed professionally . . . be a successful businessman . . . get married . . . have a lovely family.”

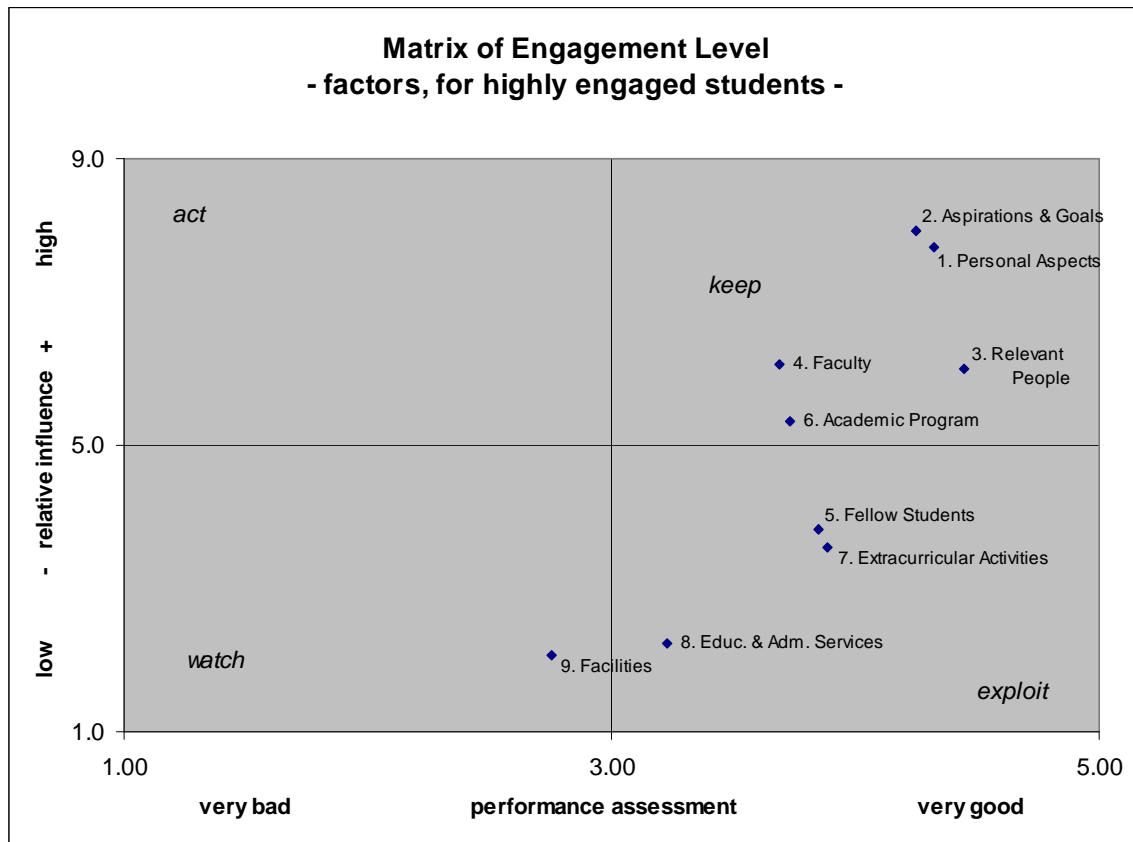


Figure 5.5 Matrix of Engagement Level: Factors

No factor appears in the Act quadrant, which means that at this level of resolution no factor requires urgent attention. And only Factor 9, Physical Plant, is in the Watch quadrant, since it has low relative influence (the lowest) and low performance (the lowest among all factors), between “Bad” and “Fair.”

Matrix of Engagement Level: Sub-factors

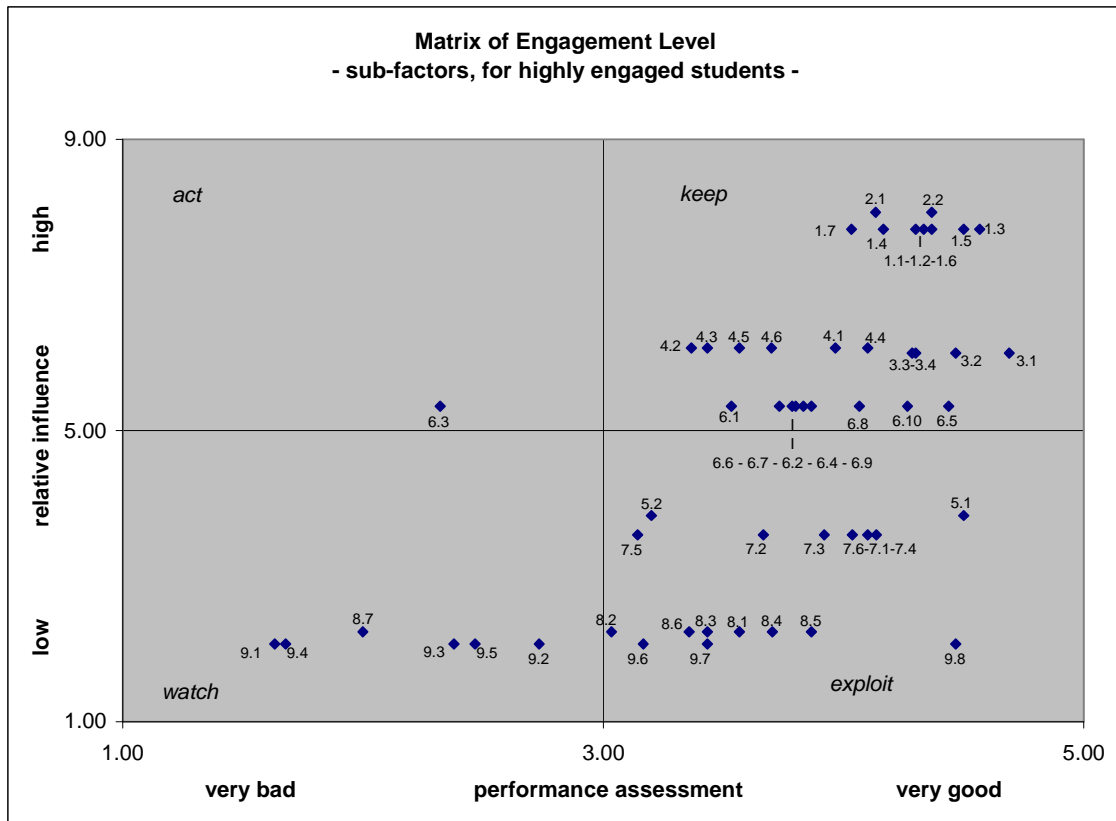
As mentioned earlier, the 9 factors that affect student engagement were divided into 52. Though it might not be easy for someone to rank 52 factors from most to least influence, it is possible to assess their performance. Therefore, each graphed sub-factor

retains the level of relative influence of its principal factor but has the average performance assessment given by the participants. Figure 5.6 in the next page shows the Matrix of Student Engagement for the sub-factors, representing the opinions of the students who participated in the study.

The sub-factors were graphed using the following method (presented in Chapter 4): 30 highly engaged students, 14 freshmen and 16 seniors, determined for each of the 9 factors, its relative influence by assigning it a value from 1 (least influential) to 9 (most influential), then evaluated the performance of each of the 52 sub-factors on a scale from 1 (very bad) to 5 (very good). The 30 results of relative influence of each factor were averaged (and represent the “height” of the factor/sub-factor on the matrix), and the 30 results of performance of each sub-factor were averaged (represented by the “horizontal” location on the matrix). Then each sub-factor was placed accordingly.

One sees at first glance that a sub-factor appears in the Act quadrant of the MEL: impact and effectiveness of courses taught in large sections (#6.3). Students consider it important and its performance “bad.” Further, some sub-factors with low relative influence have very bad performance assessment, such as: parking lots (#9.1), facilities for the handicapped (#9.4), and computer labs (#8.7). Also apparent is that the elements which most influence engagement also have very high performance assessment, especially the sub-factors of Personal Aspects (#1), Hopes and Personal Goals (#2), and Family (#3). The faculty don’t consider these students successful by chance!

The following sections present further interpretations of the matrix and other results of the study.



1. PERSONAL ASPECTS
 - 1.1 habits
 - 1.2 self-confidence
 - 1.3 interest in the discipline / program
 - 1.4 time on task (academic, extracurricular activities)
 - 1.5 live according to human values
 - 1.6 class participation / questions / talk w/faculty
 - 1.7 personal situation (economy, emotional stab, health)
2. PERSONAL ASPIRATIONS AND GOALS
 - 2.1 goals (defined, clear)
 - 2.2 commitment with goals
3. RELEVANT PEOPLE (parents, siblings, boy/girl friend)
 - 3.1 positive influence - parents
 - 3.2 positive influence - family (siblings, uncles, aunts)
 - 3.3 positive influence - boy/girl friend
 - 3.4 positive influence - friends (in and out of the college)
4. FACULTY
 - 4.1 knowledge / professional experience
 - 4.2 teaching skills, abilities
 - 4.3 motivation, commitment, enthusiasm
 - 4.4 my relationship / trust / communication with them
 - 4.5 faculty inspires, encourages, guides, coaches
 - 4.6 program head; service, availability, competence
5. FELLOW STUDENTS
 - 5.1 commitment, fellow students (immediate circle)
 - 5.2 commitment, fellow students (all students)
6. ACADEMIC PROGRAM, ACADEMIC ELEMENTS
 - 6.1 program, curriculum (design, relevance, flexibility)
 - 6.2 classes: content (relevance, quality, design)
 - 6.3 massive classes (impact, effectiveness)
 - 6.4 fep (capstone course): relevance, quality, learning
 - 6.5 professional practice: relevance, quality, learning
 - 6.6 academic rigor: appropriate to be successful
 - 6.7 academic awards and distinctions
 - 6.8 reputation / prestige: Institution
 - 6.9 humanistic environment: Institution
 - 6.10 fit (myself as student, and the institution)
7. EXTRACURRICULAR ACTIVITIES
 - 7.1 extrac. classes & acts: relevance, opportunities
 - 7.2 conferences, academic events
 - 7.3 student government, groups: opportunities, relev.
 - 7.4 social service: relevance, impact, learning
 - 7.5 support to students from other states / countries
 - 7.6 my own participation in extracurricular activities
8. EDUCATIONAL AND ADMINISTRATIVE SERVICES
 - 8.1 administrative services (cleaning, security...)
 - 8.2 registrar's office (CIAA): services offered
 - 8.3 library: collection, service hours, service
 - 8.4 scholarships: opportunities
 - 8.5 work in campus (scholarship): relevance, quality
 - 8.6 timely information related with events, deadlines
 - 8.7 computer labs: nbr. of computers, service, quality
9. FACILITIES
 - 9.1 parking lot: accessibility, availability, cost-benefit
 - 9.2 classrooms: equipment
 - 9.3 classrooms: air conditioning
 - 9.4 facilities for the handicapped
 - 9.5 cafeteria (service, space, cost-benefit)
 - 9.6 areas for students (to hang out)
 - 9.7 areas to study / teamwork
 - 9.8 green areas / gardens

Figure 5.6 Matrix of Engagement Level: Sub-factors

Discussion and Interpretation of Results and Findings

Engaged Students: Freshmen and Seniors. . . Are They the Same?

The answer is Yes. This study found no significant differences between freshmen and seniors from the perspective of student engagement. Both groups answer questions the same way. In other words, the same factors affect both freshmen and seniors, who have very similar experience of them.

The results indicate that the engaged students in this study are that way when they enter the university and they stay that way until they graduate. The study identified no seniors who said their engagement level had changed significantly during their studies. Surely, some students' level of engagement changes significantly as they progress, but this study does not address that question.

Why are Students Engaged and Successful?

According to the data accumulated in this study, the students are successful because the factors which most affect their engagement, the drivers, “work” well. The things that determine how engaged they are work well together, the rest does not matter—though some factor with low influence and poor performance—like the parking lots—might detract to some degree from their engagement.

To review, the students identified the nine factors that affect their engagement and then signaled the four most influential: Personal Aspects (#1), Hopes and Goals (#2), Parents/Family (#3), and Faculty (#4). Finally they gave those four factors high grades

of performance: “I have been very organized and disciplined. . . . My goals are clear. . . . My parents are all for me I have great teachers.” So the important things are working. Those four factors are “most influential” because they are in the upper reaches of the MEL and they drive the SIDs, and “good performing” because they are in the right reaches of the MEL.

The matrix presented in Figure 5.6 shows the sub-factors with the greatest *real* contribution to student engagement and appears on the Strengths line. Since the study involved highly engaged students, that will to some extent answer the question, “Why are you so engaged? So successful?” The answer is, “Because the things that really affect my engagement are also in very good shape in my life, such as” The sub-factors are listed in Table 5.2, beginning with those that really contribute most to engagement.

Why are you so engaged? So Successful? (17 sub-factors with highest <i>real</i> contribution to engagement)	
(1.3)	Interest in the discipline / major
(1.5)	Live according to human values
(2.2)	Commitment to goals
(1.6)	Class participation: questions, comments, talk with faculty
(1.2)	Self-confidence
(1.1)	Personal habits (organization, discipline)
(2.1)	Goals (defined, clear)
(1.4)	Time on task (academic & extracurricular activities)
(1.7)	Personal situation (health, economy, emotional stability)
(3.1)	Parents: positive influence
(3.2)	Family (siblings, aunts, uncles): positive influence
(3.4)	Friends (in and out of the college): positive influence
(3.3)	Boy/girl friend: positive influence
(4.4)	Relationship with faculty: trust, communication, openness
(4.1)	Faculty: knowledge, professional experience
(6.5)	Professional practices: relevance, quality, learning
(6.10)	Fit between student and college

Table 5.2 Sub-factors with Highest Real Contribution to Engagement

The list shows the 17 sub-factors, from a total of 52, which actually contribute most to successful students' engagement. They are the way they are because of those 17 factors, and all 17 are in the Keep quadrant of the MEL.

One realizes inevitably that all the sub-factors of Factor 1, Personal Aspects, and Factor 2, Hopes and Goals, are on the list; further, they are the 9 elements which contribute most for student engagement. That leaves us with the conclusion that students who get ahead are those with the personal attributes they need: interests, skills, habits, stability, vision.

It is interesting to note the existence in the list of two particular factors: *interest in the major* (#1.3), the one sub-factor among the 52 which contributes most to student success, and *fit between student and college* (#6.10). Both have to do with how students feel about the institution, so it could be said that successful students hit the bullseye when they chose a school and a major. That reinforces the findings of Cope and Hannah (1975), who pointed out that "our research tells us it is the fit between student and college that accounts for most of the transferring, stopping out, and dropping out" (p.3). Other writers emphasize that fact (Schulman, 1976; Newcomb and Flack, 1964; Pascarella and Terenzini, 1979; and Tinto, 1993). The perceptions of the successful students in that regards are overwhelming.

"Well, first, I'm really interested in what I'm studying . . . My major fascinates me, so I'm motivated . . . I love my major, I am passionate about learning . . . I feel happy here, like a fish in water . . . This is a school for people who want to dedicate themselves to live the student life, to have the experience a hundred percent, like me."

The sub-factors related to Faculty (#4) and Major/Academic Program (#6) come after those related to Personal Aspects (#1) and Hopes and Goals (#2). Regarding faculty, the most contributory sub-factors are level of contact, communication, and confidence between student and instructor (#4.4) and faculty knowledge and professional experience (#4.1).

Highly Engaged Students: in Charge of their Own History of Success

The information in Chapter 4 and the discussion up to now lead to the conclusion that the secret to highly engaged students' success is the students themselves: "I am very organized. . . . I work hard. . . . I am very disciplined. . . . I know what I want." Such comments agree with Kuh (2001), who notes that the time and energy that students devote to educationally purposeful activities are the single best predictor of their learning and personal development.

The highly engaged students who participated in this study are in charge of their own history of success for a simple reason: of the 52 sub-factors they identified that determine the level of their success, the 9 with greatest contribution depend on them, their attitudes, and their behavior. Those 9 sub-factors, presented in Table 5.2, are both relevant and perform excellently. In other words, highly successful students make themselves successful. From the perspective of factors, the two which affect their success most, Personal Aspects (#1) and Hopes and Goals (#2) also have fairly respectable performance.

That is neither a question of luck or a coincidence. At the very least, we know it is a fact we can describe, analyze, and perhaps replicate. Successful students say that having clear goals is very important to being a good student, and they confirm that when they speak of their experience: “My goal is very clear, super clear, that’s it . . . Well, I’ve got lots [of goals]! . . . I know where I’m going.” That and other factors explain why they are so good. What would be the case of at-risk, low-performing students? Would they have clear goals? Would they have bad study habits? A difficult personal situation, health or economical? Not committed to those goals? Lack of energy? According to the research already done, we don’t know. But for successful students, we do know that the most influential factors perform well, and that is the key to their success.

The Essential Ingredient: “Good” Parents and “Good” Faculty

The Matrix of Engagement Level (for factors) shown in Figure 5.5, show that students who succeed do so because they have good habits and clear goals. But why? Most likely, they were not born that way; something affected them. The answer is in the SIDs generated for both freshmen and seniors (Figure 5.3). Successful students generally believe they are the way they are because of their parents and their teachers: their knowledge, interaction, influence, support, and expectations. In IQA language, parents (#3) and faculty (#4) are the system’s *drivers*. So are services (#8) and physical plant (#9), which are not considered “essential ingredients for success” here because the students say those factors influence their engagement least. Parents and Faculty, on the

other hand, are the two factors which most affect engagement after Personal Aspects and Hopes and Goals (see Table 4.4).

The students are successful because they give their parents and teachers an important role in their engagement and *further* because parents and teachers are doing a good job. They are high performance *drivers*. The MEL of sub-factors (Figure 5.6) confirms that. All the sub-factors related to family and teachers are in the Keep quadrant, which identifies them as the system's strength.

Let us turn first to parents and family. In the MEL of principal factors (Figure 5.5), family (#3) has the highest performance in the system. In the MEL of sub-factors (Figure 5.6), among the 52 sub-factors that affect engagement, the one with the highest performance rate (with a result of 4.7/5.0) is parents (#3.1). No other factor had greater consensus or emphasis in the interviews with the students. Practically all had excellent experience with their parents, as their comments show.

“Ah! My parents are the base for everything! . . . In my personal case, my parents support me a lot . . . It's super important for them to support you . . . My family is very united, and they always support me . . . My parents' support gives me confidence, makes me feel peaceful, like I'm not alone . . . My mama, I love her so much . . . When I picked a major, my parents' role was to give me freedom . . . My parents taught me good habits ever since I was a little girl . . . My parents did a good job! . . . My main goals are to please my parents and to thank them for everything by earning a college degree.”

One last interpretation related to parents: one of the most frequent student comments in the interviews was, “My parents support me in everything.” The statement is surprising, since one might expect the parents to have done more than simply offer

support. But if students were asked, “And how long have you been like this?” They always said, “Since I was a kid. My parents raised me to succeed.” That supports the argument that students are successful because of their personal make-up, which is to some degree the result of their parents and teachers influence. In college, successful students no longer see their parents as the source of their formation, but rather of support—moral support, support for their studies, support for choosing a major. They consistently say their parents raised them that way from their earliest years, but all also say that *now* they are in charge of their own lives—and their parents *support* them.

Faculty (#4) are the third most influential factor on student engagement—although the third worst evaluated with an average just below “Good.” Even so, Faculty is in the Keep quadrant on the MEL. The reason for that high importance and “acceptable” performance seem to come from the students themselves. “The faculty is the most important thing at school, [and] I’ve had some very good teachers, some not so good. But I stick to the good ones!” Perhaps if the performance of good and bad faculty were evaluated as independent groups, the good teachers’ performance would have equaled the parents’. Successful students agree that faculty play a primary role in their lives in general, not only in class. They say that in class, the most important thing is to awake their interest and motivate them to find the sense of what they are studying:

“A motivated teacher who obviously likes to teach and teaches . . . [We, the] Students always know when a teacher likes to teach, when he knows what he’s teaching, when he’s interested in us. You can’t fake that! . . . What affects me most is the teacher’s interest in the class, how interested he or she is, how much he or she likes to teach. That’s immediately contagious . . . I believe lots of my teachers have motivated me for class and for my major, like their enthusiasm and conviction is catching. I had one teacher who just

loved his field. Loved it, loved it! Have you run into people like that? I learned more in that course than any other in the degree plan!”

Recall, the sub-factors of Faculty with the highest performance evaluation deal with how students relate to them: *trust, communication, openness* (#4.4), and *knowledge and professional experience* (#4.1).

What about Fellow Students (#5)? Successful students distinguish clearly between “my friends” and “the other students.” To the former, they give the fourth best performance assessment of the 52 sub-factors—4.5 over 5.0, between “Good” and “Very Good”—and their comments in Chapter 4 back that up. On the other hand they give the rest of the students one of the lowest marks of all—3.2 over 5.0, slightly above “Fair.” Among the comments in Chapter 4, few were more pointed:

“Fellow students are a big influence . . . I like to be with people who work they way I do . . . We push ourselves, we motivate ourselves to keep on studying . . . [and] teamwork is great . . . But there are lots of apathetic, unmotivated people. They get in the way. I leave them alone.”

One further comment about fellow students: when they prepared the SID, very few students said their friends greatly affected their personal aspects or their goals but rather that they became important when it was time to work as a team, support each other, or enjoy themselves together.

The Engaged Student and the Institution

Engaged students have very clear and uniform perceptions of the institution where they study. The most important, which appeared often, is, “I really like my major... and I feel happy here, like a fish in water.”

What do they like most about the institution? Good teachers, especially contact with them—“Some teachers have been as interested in me as my own parents or friends”; their major; certain academic experiences, such as practical and synthesizing courses (FEP/thesis, professional practices); Social Service; electives; the institution as a whole—image, humanist ambience, pride; the diversity of curricular and extra-curricular activities; other good students; scholarships and work-study.

What do they like least? Parking lots, bad students, huge class sections, bad teachers, bad laboratories and computer labs—and lack of academic rigor.

Relationship Among the Elements that Affect Engagement: Discussion

The differences and similarities between the freshmen and seniors’ SIDs were discussed at the beginning of this chapter, where both diagrams were shown to be the same (Figure 5.3).

Now further interpretations of the SIDs are possible. The drivers, the elements with greater influence over others, are in the left part of the diagram. We know before hand that we must focus our attention there if we want the system to behave in a certain manner. The system’s drivers are clearly parents (#3) and current and past teachers (#4). It is true that educational and administrative services (#8) and physical plant (#9) are also

drivers, but their relative importance is slight in the participants' comments. The discussion, then, should center on parents and teachers.

The fact that arrows go only from parents (#3) and teachers (#4) to personal aspects (#1) and goals (#2) means the majority of the participants believe that is the real direction of the relation. That fact increases the importance of parents and teachers, since the relationship indicates that students' personal aspects and goals are the result of their parents' and teachers' instruction, care, work, companionship, and expectations. One participant said it this way: "Well, I'm successful because I have good habits and also because I know what I want . . . But I have those habits and these goals in part because my parents and teachers formed me that way." Both SIDs reflect the truth of that statement for most of the participants. Then "good" parents and teachers are related with good habits and clear goals, and vice versa.

In the center left section of the SIDs is the matter related to the student, personal aspects (#1) and hopes and personal goals (#2). The IQA protocol considers those secondary drivers, which means that in terms of the system, they are more causes than results. The relevance of that is that the student takes on a pro-positive role in his own education, as has been shown earlier. They are able to decide the intensity of their university adventure.

In the center right section of the SIDs is academic experience: fellow students (#5), major (#6), and extra-curricular activities (#7). The IQA protocol considers them secondary outcomes, because they are more results than causes. Therefore the quality of academic activities and how much or little students enjoy and profit from them depends

principally on the role of parents and teachers, and of habits, behaviors, and student skills—the *drivers*.

Finally, the outcomes of the system are in the right section of the SIDs: learning and persistence (#10) and student success (#11). Those outcomes depend on the experiences students have in and out of the classroom, which in turn depend on student attitudes and goals, which in turn depend principally on the influence of parents and teachers. The *timbre* of the system depends on the drivers: in both SIDs, the good performance of parents, teachers, and personal qualities generate high learning, persistence, and success—and vice versa.

The system is almost linear, with few recursions, loops, or feedbacks, because the participants in the study coincide considerably in their opinion of the relation between most pairs of sub-factors. Most said, for example, “Factor 2 affects Factor 4.” Nevertheless, if we increase the system’s “power,” that is, include other relations of lower frequency, three important recurring relations appear: personal aspects (#1) and goals (#2) affect teachers (#4), in the sense of, “If I know what I want, I’ll find the best teachers for class and advisement.” Academic experiences (#6) and extra-academic experiences (#7) affect personal aspects (#1) and goals (#2) in the sense of, “If I like my classes and see their relevance, then that reinforces my habits, motivates me more, and helps me refine my goals.” And finally learning (#10) and success realized (#11) affect both personal aspects (#1) and goals (#2), in the sense that, “Knowing more and having successful experiences increases your self-confidence, your desire to improve . . . and makes me set ever higher goals.” These three relations, though not so strong as to appear

in the freshmen and senior SIDs, are useful in creating a general model of engaged students in the following section.

What are we Missing?

Upon reviewing the results and interpretations thus far, it is possible to identify some practical elements or from the literature which have not been mentioned in this study—at least not expressly. Some of those follow with a brief interpretation of why they occur.

In the focus group sessions, not one of the 765 ideas included the word *intelligence* as a factor affecting engagement. Moreover the students said things in the interviews like, “I’ll tell you, to succeed in school, trying hard is more important than being smart.” Kuh (2001) identifies time and effort as better predictors of success than intelligence. The reason could be that all successful students are sufficiently intelligent to succeed in college, which they take for granted, a fact of life.

Certain pragmatic factors were not mentioned, like having a car or sufficient study materials. The reason could be that the study was undertaken in a university for middle and upper-class students, where such needs are already met and therefore not relevant.

The word *leader* appears rarely in the study on a few cards from the focus groups and in a few interviews. Perhaps that is because students do not see them since most of their dealings are with faculty and mid-level employees, like program directors or

secretaries. That the role of leaders was not discussed openly during the study is interesting, because the impact of leadership on the institution is irrefutable, particularly on faculty and resources (Roueche, Baker and Rose, 1989; Kerr, 1984; Fisher and Koch, 1996; McLaughlin, 1996).

Services such as tutoring, mentoring, and counseling do not appear through the study, except a single card among the 765 generated in the focus groups, which mentioned *guidance counseling*. That could be because successful students do not need such services, so they don't "exist" for them . . . and if they need them, they demand them! The literature on retention notes how low performing students must be brought to the services they need, like tutoring and counseling, while high performing students' drive impels them to find what they need (Astin, 1975; Kalsner, 1991; Noel and Levitz, 1985).

Finally, the focus group sessions said little about interpersonal skills, which are amply treated in the literature on retention and engagement (Tinto, 1993; Pascarella and Terenzini, 1979; Huh *et al.*, 2001). The participants treated those themes amply in the interview, however.

Further Topics for Discussion and Interpretation

All the factors are influential, but some more than others. The 9 factors the highly engaged students identified *affect* their engagement. From among the thousands and thousands of variables related to their experience, they signaled those 9 as the relevant ones, but each at its own level. The claim is, therefore, two-fold: the 9 factors

are influential, but the relative differences among them is dramatic. Almost all participants thought that Hopes and Goals (2) the most influential and Physical Plant (9) the least.

There is no single profile for the engaged student. The differences among the participants in the study are fascinating and make a single definition of the engaged student impossible. Some said their parents were key in their lives, while others acknowledge their parents but claimed their success as students on their own merits. Some participants described supremely clear personal goals, while others had fairly undefined ideas about their future. Some said their parents spent hours helping them with homework in the first two years of elementary school; others hardly recalled any supervision with homework from parents or teachers. Some said their fellow students influenced their habits, hopes, and behavior; others said their friends had nothing to do with the way they are. Some spoke of endless extra-curricular activities, while others hardly took part. Some very dedicated to studying, others not so much. Leaders and followers. Introverts and extroverts. In conclusion, this study presents only a few patterns but certainly no universal model or prototype of the engaged student.

Males or females? Which are more engaged? The study did not try to differentiate by gender. Nevertheless, 72% of the participants were women. In one session to identify candidates, after the instructors had proposed several women, they asked, "Do you want men too?" The researcher replied, "I want engaged students, men or women."

For engaged students, almost everything about life is good. The sub-factors that affect student engagement which appear in the right half of the matrix (Figure 5.6) outnumber those on the left side 45 to 7. That is to say, almost all the elements that influence engagement show good performance: habits, parental influence, emotional stability, goals, relations with faculty, satisfaction with the major, the green spaces. All that suggests attractive areas for further research, which will be discussed below.

Demographic questions. The detailed analysis of demographic questions in Table 4.1 reveals interesting data. Although (very) few students in the institution are adults, workers, or parents, this study included only traditional students—except for one woman, married and a mother; that suggest that traditional students—full-time, young, supported by family or scholarships—enjoy the educational experience most fully. As the table shows, most of the participants would change neither majors nor schools. Further all had clear ideas about how long they would take to graduate: 10 or fewer semesters, which according to Astin (1975) is the second clearest predictor of student success. Seventy-seven percent (77%) of the participants have some kind of financial aid, compared to the institutional total of 25%. Half the participants work on campus, which according to the results presented in Chapter 4 increases their level of commitment and identification with the school; Astin (1975) pointed out that the work choice which most increases the likelihood of graduation is a part-time job on campus. Finally, none of the freshmen work off campus and only 38% of the seniors, factors which also affect their likelihood of graduating.

Proposed Model for Student Engagement

Given the limitations outlined in Chapter 1, a model of student engagement based on the data gathered is not possible. Possible, however, are some generalizations and patterns which can be useful to engaged students at the site of the study or similar places and for future projects related to the theme.

Factors that Influence Student Engagement

The table below (5.3) lists the factors that affect student engagement identified by the participants (Tables 4.1 and 4.3). This list portrays the third level of resolution.

FACTORS THAT INFLUENCE STUDENT ENGAGEMENT B. Flores' Model
1. Personal Aspects <ul style="list-style-type: none">1.1 Values (happiness, respect, service)1.2 Qualities, attitudes (positive attitude, maturity, security, interest in learning, motivation, responsibility, desire for improvement, commitment, energy)1.3 Habits, skills (time management, personal organization, discipline, persistence)1.4 Personal situation (self-esteem, emotional state, health, finances, place of origin)1.5 Behavior as a student (participates, asks questions, talks to teachers)
2. Hopes and Goals <ul style="list-style-type: none">2.1 Hopes (desire to be somebody, to succeed)2.2 Goals (long and short term goals, plans to realize them)2.3 Congruency (act on hopes, goals, plans)
3. Important People <ul style="list-style-type: none">3.1 Parents (teaching, encouragement, trust, support, expectations)3.2 Family (interactions, influence, sibling support, grandparents, uncles and aunts)3.3 Friends (interactions, influence, expectations, support)3.4 Others (models to follow, model for others)
<i>... table continues</i>

... continued

4. Faculty and Staff

- 4.1 Faculty (education, teaching and professional experience, teaching skills, enthusiasm, support, fairness, courtesy, personal contact, feedback to students, expectations)
- 4.2 Program Director (support, guidance, communication)
- 4.3 Leaders, administrators (enthusiasm, accessibility, congruency)
- 4.4 Others (secretaries, clerks, service people; courtesy, support, service)

5. Fellow Students

- 5.1 Close friends (integration, commitment, teamwork, habits, effort)
- 5.2 Other students (integration, commitment, teamwork, habits, apathy, mediocrity, indifference)

6. Major

- 6.1 Curriculum, courses (design, relevance, quality, up-to-date)
- 6.2 Assignments, exams (interesting, challenging, workload, academic rigor)
- 6.3 Practices, thesis, linkage to the workplace (relevance, quality)
- 6.4 Institution (prestige, quality, ambience, pride, accreditation, student body, socio-economic status, religion)
- 6.5 Others (methods, effectiveness of teaching, holistic education, schedule, recognition, student-institution fit)

7. Extra-curricular Activities

- 7.1 Activities, courses, events (variety, relevance, quality)
- 7.2 Groups, associations (opportunities, support, relevance)
- 7.3 Social Service (relevance, learning)
- 7.4 Student exchange (opportunities, support)
- 7.5 Others (support for non-local or foreign students, leadership and entrepreneurial development)

8. Educational and Administrative Services

- 8.1 Library (collection, arrangement, databases, schedule, service)
- 8.2 Computer labs (number of terminals, quality, schedule, software)
- 8.3 Services (registrar, treasury, registration, quality of service)
- 8.4 Scholarships (opportunities, selection, work-study)
- 8.5 Support services (cafeteria, security, housekeeping, online services)

9. Physical Plant

- 9.1 Facilities (classrooms, sports areas, auditoriums, number and quality)
- 9.2 Public spaces (study areas, density, teamwork, lawns and gardens)
- 9.3 Parking (availability, access, cost, quality)
- 9.4 Others (noise, campus traffic, location, number of people)

Table 5.3: Factors that Influence Engagement: Proposed Model

Relative Importance of Factors

Figure 5.7, based on the participants' opinions, show the relative importance of the factors that influence student engagement.

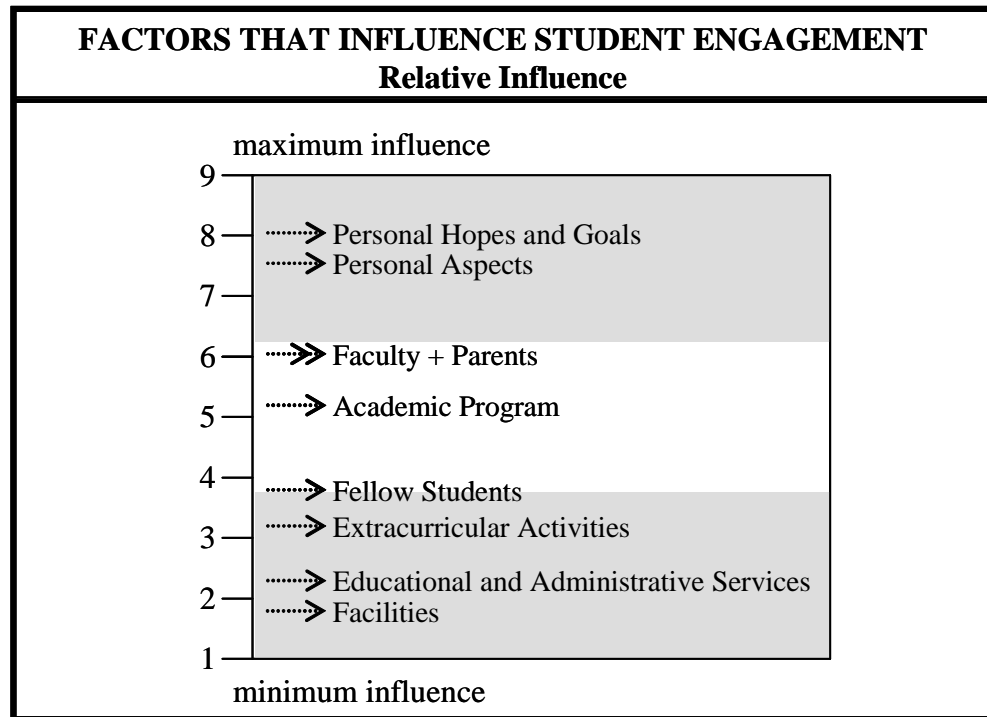


Figure 5.7 Relative Influence of Factors on Engagement: Proposed Model

Relationships Among the Factors

The following general SID (Figure 5.8), based on information provided by the participants when they created their own SIDs along with their comments and literature findings, shows the relations between the factors that affect student engagement.

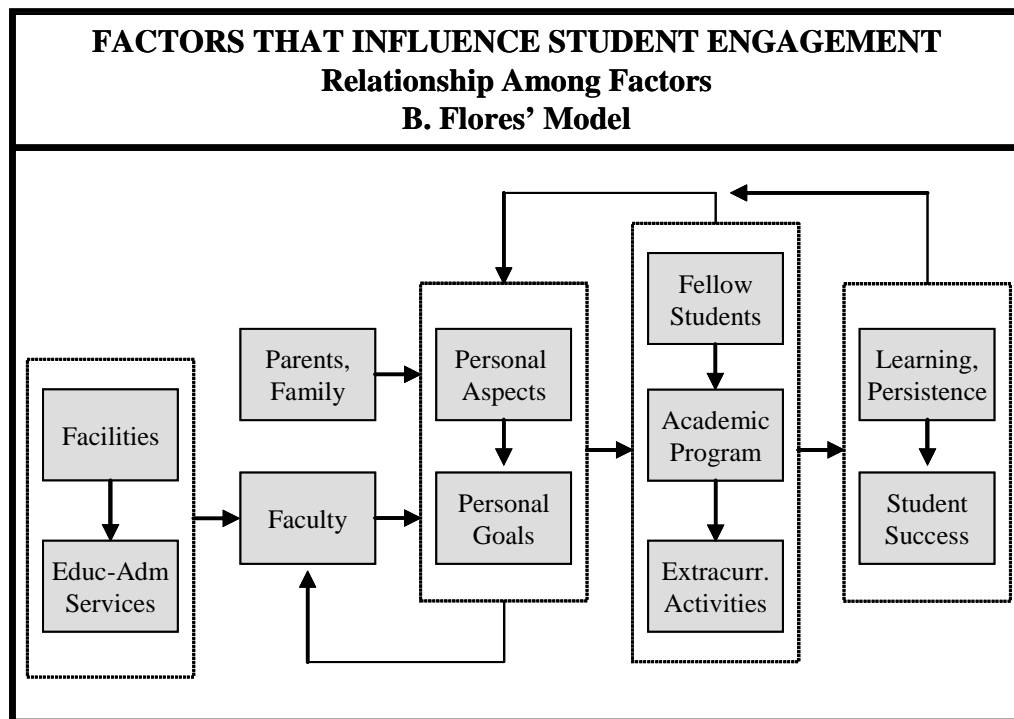


Figure 5.8 Relationship Among Factors: Proposed Model

The diagram is of the same tenor as the ones presented previously, though this one includes the recursions.

Reading the Model: Parents and faculty influence personal aspects and student goals through their interactions, teachings, expectations and support. Institutional services and facilities affect faculty and students, since they are tools at the service of

teaching and learning. Personal aspects determine student hopes and goals. Students, with the interaction of parents and faculty, determine the type of academic and extra-curricular experience, as well as the way they interact with fellow students. Finally, the entire university experience determines how much students learn, how well they persist, and the extent of student success. Students as persons (habits, values, hopes, goals) are constantly changing in response to the university experience, learning, and the level of success achieved. That change and their personality, further, affects student relations with faculty and the type of teachers they prefer and the level of relations they establish with them. The result of the interaction of all those factors and the quality level of each are the ultimate causes of student success.

Types of Engaged Students

The students who took part in this study are successful. An analysis of their Matrix of Engagement Level (Figures 5.5, 5.6) shows that the factors and sub-factors that affect their performance are “loaded” to the right side of the graph. What would be the MEL pattern of moderately engaged students? Of disengaged students? The data in this study does not provide precise answers to those questions, but they do provide bases to make a respectable guess which is congruent with the literature on the theme, particularly the research of Astin (1975, 1993), and Noel, Levitz and Associates (1985, 1999).

Figure 5.9 shows some approximations of the form a MEL of different types of students might take, depending on the level of engagement. For highly engaged students, most factors have good performance (located in the right half of the MEL) or most of the

important factors show good performance. For moderately engaged students, the important factors show variable performance—some good, some bad. For disengaged students, most factors show poor performance or most *important* factors perform poorly. To repeat, these graphs are a suggestion for further research more than an explanation of the phenomenon.

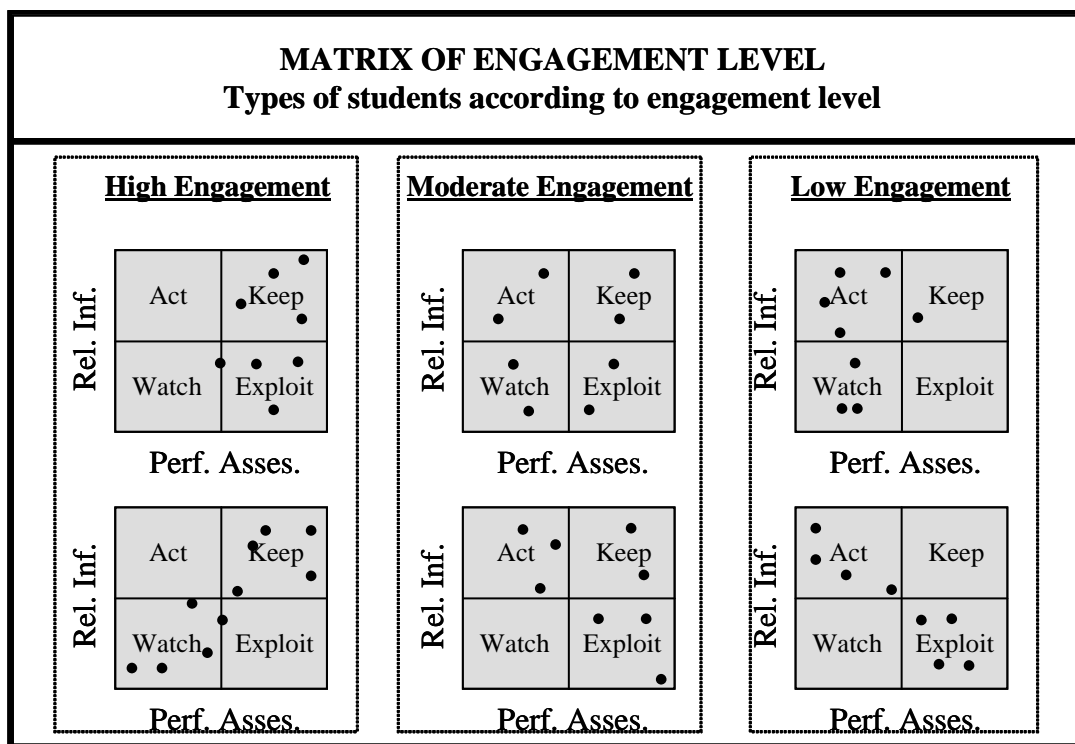


Figure 5.9: Types of Students According to Engagement Level

Describing the Engaged Student

Using the results and interpretations presented in Chapter 4, we can describe the highly engaged student. The description is not universal, but limited by the size of the sample, the institution, and the researcher's experience. The description is outlined in the

paragraph following each of the factors that affect student engagement in “Student Perceptions of the Factors that Affect Engagement” in Chapter 4, for both freshmen and seniors.

Implications for Practice - Recommendations

Numerous recommendations for the institution to improve the performance of its successful students and to provide more profitable and enjoyable educative experiences for other students are possible. Those that follow were generated from the results and interpretations discussed previously. The first are additional interpretations of the Matrix of Student Engagement, which identifies the sub-factors with greatest marginal contribution to student engagement. The second is a list of recommendations grouped by factors. Where appropriate, suggestions will be identified as specifically for highly engaged students or for students in general.

Recommendations by Sub-factors

The Matrix of Engagement Level (MEL) let us identify the factors of greatest *marginal* contribution to the “system” (Figure 5.6). They occur on the “weaknesses” line, as shown in Figure 5.4. If their performance improves, it is reasonable to hope that student engagement will also improve. Table 5.4 shows the first 17 sub-factors which appear on the “weakness” line. The factors are listed beginning with the greatest marginal contribution, or in other words in the order in which they should be addressed to answer the question, “What must we improve to improve your engagement?”

<p>What must we (and you) improve to improve your engagement?</p> <p>- 17 sub-factors with highest <i>marginal</i> contribution -</p>
<p>(6.3) Large sections: impact, effectiveness (4.2) Faculty: teaching skills, abilities (4.3) Faculty: motivation, commitment, enthusiasm (4.5) Faculty: inspires, encourages, guides (4.6) Program head: service, availability, competence (6.1) Major: design, relevance, flexibility (1.7) Personal situation (health, economy, emotional stability) (9.1) Parking lot: accessibility, availability, cost-benefit (2.1) Goals: clear, defined (5.2) Fellow students (in general): commitment, performance (9.4) Physical plant for the handicapped (6.6) Academic rigor: appropriate to be successful (8.7) Computer labs: number of computers, service, quality (7.5) Support to students from other states, countries (6.7) Academic awards and distinctions (for students) (1.4) Time on task (studying, reading, etc) (6.2) Classes: content (relevance, quality, design)</p>

Table 5.4 Sub-factors with Highest Marginal Contribution to Engagement

Reflection on those factors is interesting. Large class sections are clearly a priority. They are important and have low performance, and the student opinions back that up; “You’ve got one teacher in a giant room with a bunch of girls who are not interested in the course.” The three other factors in most “urgent” need of attention are related to the faculty and their teaching habits and behaviors. Parking is on the list, too; though a low influence factor, becomes relevant because of its bad performance.

Also notable is that two sub-factors appear in both Tables 5.2 and 5.4, that is, they are among those which contribute most to engagement and also have high potential for improvement: personal goals (#2.1) and personal aspects (#1.7). That is because both factors have high relative influence and a performance level around “good,” so the

additional contribution that would come from moving their performance up to “very good” is worthy of consideration.

Naturally, the factor which should least worry the institution is green areas (9.8) in the extreme lower right hand corner of the matrix, the Exploit quadrant. The factor has low relative influence and excellent performance, between “good” and “very good,” so improvement would do little to change student engagement.

Recommendations by Factors

1. Increase the positive influence of parents.

The institution can take action to strengthen the influence of parents on the level of student engagement. Parents can be more involved in the university experience of their children through educational conferences, frequent mailings of information about student performance, and promotion of direct contact between parents and faculty and administrators. Similarly, the institution can publicize the findings of this study in elementary and middle schools to emphasize the role parents play in the lives of successful students.

Parent visits to the campus—to see their children in action, attend awards ceremonies, or review projects on display—affect students very positively, since they reflect interest, support, and high expectations. Such events should be multiplied and promoted.

2. Improve the performance and rigor of the faculty.

The data gathered in this study show that one institutional factor which most affects participations is the uneven performance of the faculty. They prize their good teachers but lament that others do not meet “expectations.” The principal recommendation from that factor is that the university design and implement systems to identify low performing faculty and offer them opportunities to improve—or remove them. Among the flaws students name most are poor teaching skills, lack of enthusiasm, and lack of rigor. Teaching skills could be improved by improving communication skills, learning new methods of explanation and evaluation, and meeting academic objectives. As for enthusiasm, nothing more sparks student interest and desire to learn than an enthusiastic teacher. There is considerable room for improvement here. In terms of rigor and discipline, students criticize some teachers’ inability to control a class, lack of meaningful feed-back (if any) on exams and assignments, over-reliance on team projects at the expense of individual work, grade inflation, and failure to provide challenging and interesting activities. Department heads will doubtless play an important role in implementing these recommendations.

Although no faculty were interviewed, some institutional policies seem to have impaired their ability to teach effectively and insist on high levels of performance. Large class sections, grading policies, and a considerable number of activities not related to teaching have impeded good teaching. Those policies should be reviewed and adjusted to provide positive impact on engagement.

3. Provide programs to help low performing students improve their habits.

Personal aspects are a definite strength for successful students. Though they could be improved, the institution would benefit from having more students like those who participated in this study. Therefore it would be wise to provide more intervention programs, such as advisement, tutoring, counseling, and vocational guidance, led by the best faculty and the most successful students for students at risk (Goodrick, 1980; Tinto, 1993; Rickinson and Rutherford, 1995; Ott, 1978; and Hurd, 2000). Institutional programs of that kind already function have shown good results.

4. Help low performing students develop clear and ambitious goals.

As with the previous factor, successful students have no problem with this factor. Therefore it is recommended to improve this factor in moderately successful or unsuccessful students, using the tactics outlined in the foregoing paragraph. The literature suggests that informal or formal conversations among faculty and students about their goals and intentions are a powerful tool for strengthening engagement (Kuh, 2001; Tinto, 1993).

5. Improve the attitude and performance of average students.

The apathy and mediocrity of some fellow students affects successful students like few others. The recommendation therefore is that the institution raise the level of expectation for low performing students by: improving recruiting and selection procedures to attract more high performance students; involve low performing students

in successful and significant learning experiences; and raise the general level of rigor among the faculty.

The institution recently implemented programs to promote interaction among successful students and those less successful, such as peer tutoring and supplemental instruction. Those activities should be maintained and increased to provide high quality student models for the whole student body.

6. Improve the academic experience (curriculum): more challenging, more demanding, more effective teaching in large class sections; maintain the quality of culminating experiences and the humanist ambience of the institution.

The “average” performance level definitely affects successful students. As they say, the present level may be appropriate for average students but not for them. The institution should identify mechanisms to help successful students feel challenged and intrigued by academic matters: honors courses, academic excellence projects, generally increased rigor (not only in a few classes with a few teachers but throughout the university), and eliminate grade inflation once and for all and distinguish clearly among good, acceptable, and bad performance.

Large class sections have both negative impact and low effectiveness to the detriment of student engagement in general. Although the reasons for the ineffectiveness were not an object of this study, conversations with the participants reveal that ill equipped classrooms, crowding, inappropriate selection of courses to be taught in big sections, lax teachers, and bad student habits contribute to the problem. It is strongly

recommended that the institution undertake actions to improve the effectiveness and impact of courses taught in large class sections.

Culminating experiences like the FEP (thesis), professional practices, and Social Service have a very positive effect on students. Therefore it is recommended the university maintain and improve those experiences, especially in the light of student allegations that recently implemented policies tend to diminish the quality and rigor of those experiences. On the other hand, no experience was identified that “hooks” students in their first year of study, despite courses of introduction to university life and academic programs. The institution should review the effectiveness of those experiences.

The level of rigor seems to be a major issue, particularly marked among different majors and courses. Students describe very low expectations in courses in humanities and social sciences and in the core curriculum. It is recommended that the institution raise the bar in those courses and programs *systematically* so that the target variable is student performance, *not* failure and drop-outs. The small amount of time students need to spend out of class to get good grades is an unequivocal indication of lack of academic rigor. “UDEM is a really easy school. I’ve got a very high GPA, and I don’t think I’ve had to work to earn it.”

The university’s humanist ambience, the excellent relations between faculty and students, and the general atmosphere are factors that favor student engagement which the institution should maintain, since they are clearly a competitive advantage.

7. Maintain the level of extra-curricular activities and offer more support.

Generally, successful students report good experiences with extra-curricular activities and value the variety of options, the interaction with many and different kinds of students, and the pleasant and valuable learning experiences. The recommendation is to maintain the performance of extra-curricular activities and assure that the experience be truly fruitful for all students, not only successful students. (That does not imply that other students do not also enjoy those activities.)

Some services do not meet the desired levels, probably for reasons related to resources or time in operation. The institution should increase the availability of activities which promote significant increments in the level of student engagement, such as student associations, student exchanges, incorporation of foreign and non-local students, and entrepreneurship development. The advances already realized in those areas have had an important positive impact on successful students.

8. Improve service in the library, the computer labs, the Information Center, and increase student use of the library.

Although many students said the library shows a lot of room for improvement, the surprising thing is just how little students use the library. Library use should be increased, since it is one of the educational services with greatest potential impact. In particular, it is recommended that faculty design and use activities which require students to explore and take advantage of the resources available there.

By far, the worst evaluated service is computer labs and rooms. The average grade was “Bad.” The institution is encouraged to improve that service with more and better computer areas. It should also consider alternative methods, such as encouraging students to buy their own equipment.

The Student Information Center, created recently, needs considerable improvement in terms of quality of service, according to successful students, who say they find long lines, ineffective service, and unacceptable service attitudes. It is recommended that the institution establish a permanent program to improve the service.

Finally, the surprising number of participants with scholarships (77%) and who work on the campus as part of their financial aid package (50%) suggests that both factors reinforce student engagement positively and significantly. The institution is encouraged to maintain and strengthen its financial aid programs.

9. Improve parking, facilities for the handicapped, climate control in the classrooms, and areas for individual and group study.

Parking is one of the elements (sub-factors) most complained of among all those considered in the study. Though it is the group of sub-factors with least relative influence, the level of performance is so bad (the worst of all with an average evaluation below “Bad”) it causes students notable vexation and conflict. It is recommended that the institution improve parking services, particularly in terms of quantity and quality of spaces, specifically in the free areas.

Facilities for the handicapped are a problem for the institution, and it has already initiated an integrated program to provide for the handicapped. It is recommended the plan be carried through to completion. The same is true with the temperature in the classrooms. The institution has begun installing air conditioning, an improvement which should be carried out.

Successful students also noted the importance of spaces for individual or group study and that, especially at the library, those spaces are insufficient. It is recommended the institution increase the study spaces available to students.

A Systemic Focus for Improving Engagement

As mentioned in Chapter 2, isolated actions rarely improve student retention and engagement (Noel *et al.*, 1985; Tinto, 1993, 1997). It is recommended the institution adopt a systemic approach. A holistic focus can be used in many ways to deal with the matter of student engagement. Since the institution is accredited by the Southern Association of Colleges and Schools (SACS), the project can be part of a Quality Enhancement Plan (QEP), one of the core requirements of accreditation. The QEP is a major institutional initiative which seeks to improve student learning and strengthen fulfillment of the institutional mission through a program involving all campus constituencies (SACS, 2004). The topic of student engagement fits that definition perfectly.

Suggestions for Further Research

This study reveals attractive areas for increasing our knowledge and understanding of the phenomenon of student engagement. Some are described below.

Since this research focused on information provided by highly engaged students, a first point of comparison is the student with average or low engagement. Possible questions to explore are: Are the factors that affect low performing students the same as those identified by highly engaged students? What are their experiences of the factors found in this study? An answer to those questions would explain not the reasons why they drop out—high failure rate, for example—but rather the causes for that—high failure rate, *because* there was no support from their parents or acquired bad study habits. It would also be interesting to create a Matrix of Engagement Level for low performing students to discover the causes for their condition, such as, possibly, deficient personal aspects, unclear goals, parents with little positive impact, bad relations with faculty.

The study could also be replicated with students from other socio-economic strata. The participants in this study are from the Mexican middle and upper classes, though Mexican institutions which cater to the lower economic classes also have many good students. Research among them would provide information about how those students perceive the factors that make them highly engaged.

A further line of research would be to include other people in the study—parents, faculty, administrators—to learn their perceptions of the factors dealt with in this study and subdivide them according to types of students: engaged and disengaged, from different socio-economic levels, women and men. What do faculty think about the study

habits of good students? The study habits of weak students? Which elements (sub-factors) would a teacher find on Table 5.2 to explain why students are successful? What do slightly committed parents see as their role in education? How would the faculty describe highly engaged students?

As noted previously, this study included men and women, though significantly more women than men. A study that revealed if either group is more inclined to high engagement and the reasons why would be extremely valuable to the educational community.

Successful students said often they were continually exposed to high standards of performance and high expectations, at home, at school, and in other formative activities since childhood. It would be revealing to know if there is a connection between standards and expectations at home and performance at school, particularly in the first years. Could low expectations at home explain the mediocrity and apathy of many students?

Conclusions

The data gathered in this research affirms that the conceptual model developed in Chapter 1 (Figure 1.1) which was the basis for this study is well grounded. The model was developed using the ideas and findings of outstanding academicians (Astin, 1993; Chickering and Gamson, 1987; Pascarella and Terenzini, 1991; Sorcinelli, 1991; CCSSE, 2004; Kuh, 2001; Tinto, 2004). The factors identified by the successful students who participated in the study and the way they perceive them to relate to one another backs up

the conceptual model's "message": certain factors, like personal aspects and behaviors and institution policies, influence student engagement which is strongly correlated to student learning and persistence, aspects which determine the level of student success achieved.

The successful students who participated in this research pointed out nine elements that affect their level of commitment and involvement with their studies: personal aspects, personal hopes and goals, parents and family, faculty, fellow students, curriculum, extra-curricular activities, educational and administrative services, and physical plant. Those elements coincide with those signaled in Tinto's model (1993), clearly the best known model of student retention.

This study revealed that each factor affects engagement with varying intensity. Upon examination as a system of interrelated elements, some appear as causes and others as effects; some have excellent performance levels, while others show important areas for improvement.

From this study a tool (graph) was generated which identifies the factors that explain why students are committed or not, the Matrix of Engagement Level. In part from it, these conclusions were drawn.

The successful students who participated answered five questions: What factors influence your engagement? What is the relative influence of each? How does each perform? How are they related to one another? What is your perception of them? The responses were divided between freshmen and senior respondents. Analysis of the data shows there is no significant difference between the two: the factors and their opinions

of them are practically identical. In other words, according to the students, they did not become engaged at the university; they came and stay that way.

Student perceptions of the factors that affect their performance are both fascinating and powerful. Generally they think the factors that most influence their engagement (which are the “causes” in their “system”) also have high performance: parents, faculty, personal aspects (attitudes, habits, personal situation, behaviors), and personal hopes and goals. That’s why they are successful students. The really influential elements work great!

Successful students are the key to their own success. The results they achieve are a consequence of who they are and what they do. It can be said that in general they are who they are because they have excellent personal qualities and circumstances, the fundamentals of student success (Kuh, 2001): a desire to improve, a desire to learn, organization, discipline, hopes and goals, behavior in and out of class, and personal stability (emotional health, financial).

Successful students realize further that the principal causes for their success are the influence, teaching, companionship, expectations, and support of their parents and teachers who shaped them so. When they speak of family and faculty influence on their lives as students, they invariably use terms of highest praise.

Highly engaged students value good teachers and recognize certain very obvious characteristics in them: vocation, enthusiasm, teaching skill, personal companionship, and high expectations. They enjoy their major studies and are well adapted to the institution. They participate in countless activities and tend to gravitate toward other

outstanding students, students like themselves. They do not like teachers or courses that don't meet their expectations, the apathy of many students, the boredom they feel in a good many academic activities, or the quality of some institutional services and facilities.

The University of Monterrey performs well in most of the institutional factors that affect student engagement levels. Important room for improvement, however, was found in: effectiveness of courses taught in big sections, levels of academic demand and rigor, the uneven performance of some faculty, enthusiasm in the whole student body, the library and its use, service in computer areas, parking facilities, and the student support and information center. Its mission, vision and values, its administrative team, and its dedicated faculty are no doubt fundamental elements which will enable it to improve the academic experience of all its students.

There are many areas for further research on this topic: an analysis of the factors that influence the engagement of women or men, in low performing students, among parents and faculty, and among students of different socio-economic levels, to mention only a few.

The students who participated in this study illustrate in their lives the words of Tinto (2004): "Student retention is the result of effective education. We must focus on student learning and those conditions that promote student learning. Student success will follow."

APPENDIX A: SURVEY OF STUDENT ENGAGEMENT

(five pages)

Universidad de Monterrey
Proyecto *Student Engagement*

Participante número: _____

Fecha: _____

Gracias por participar en el estudio de experiencia formativa.

Por favor llena la siguiente evaluación y entrégala en la oficina 5415 (edificio 5, piso 4), o a la Srita. Blanca Cruz, en el mismo lugar, a más tardar el jueves 18 de noviembre.

Nota: llenar esta evaluación te tomará alrededor de 15 minutos.

¡Tu participación es muy valiosa!

San Pedro Garza García, N.L.
Noviembre de 2004

Appendix A, 1/5

EVALUACIÓN
IMPORTANCIA RELATIVA Y DESEMPEÑO
DE FACTORES QUE AFECTAN EL *ENGAGEMENT*

SECCIÓN 1 (*SECTION 1*).

Enseguida, se listan los 9 factores que tú y tus compañeros señalaron como “los factores que afectan (positiva o negativamente) mi nivel de compromiso e involucramiento con mis estudios;” esto ocurrió en la sesión de *focus group* en que participaste.

De entre tales factores, por favor identifica cuál es el que más influencia tiene sobre tu grado de compromiso con tus estudios, y asígnale el número 9. Asigna 8 al factor que le sigue en grado de influencia, y así sucesivamente hasta asignar 1 al factor con menor influencia sobre tu nivel de compromiso con tus estudios.

En otras palabras, ¿cuál es el factor que más hace que estés comprometido e involucrado con tus estudios? ¿Qué te hace ser como eres? A ese, asígnale 9, y luego sigue con el segundo hasta asignar 1 al último factor.

FACTOR	IMPORTANCIA RELATIVA 9 = tiene más influencia en mi <i>engagement</i>
Aspectos personales (hábitos, comportamientos, valores, habilidades).	
Metas y aspiraciones personales (tener una visión, vocación clara, comprometerme con mi visión).	
Personas relevantes (padres, familia, novio(a), amigos).	
Profesores y empleados de la Institución (profesores, director de carrera, staff, secretarías).	
Compañeros de estudios (amigos de la carrera, compañeros de generación, estudiantes conocidos).	
Programa académico (programa curricular, cursos, contenido, exigencia, actividades, pef, prácticas, relevancia).	
Actividades extracurriculares (cursos, asociaciones estudiantiles, actividades extra-clase, becas, congresos).	
Servicios y procesos administrativos (biblioteca, computadoras, tesorería, CIAA, escolar, enfermería...).	
Instalaciones e infraestructura (salones –clima, equipo–, áreas para estudio; estacionamiento; áreas verdes; cafetería).	

SECCIÓN 2 (SECTION 2).

Enseguida encontrarás una serie de factores que afectan tu nivel de compromiso (*engagement*) con tus estudios. En esta ocasión, evaluarás su desempeño o tu nivel de satisfacción con los mismos. En caso de que el factor se refiera a un comportamiento tuyo, por favor sé lo más honesto que puedas. Si con algún factor no tienes experiencia o no te aplica, deja el espacio blanco.

Anota una “x” en la casilla que mejor describa el desempeño/tu satisfacción

SUB-FACTOR	Desempeño / Satisfacción				
	☹				☺
	Muy mal	Mal	Regular	Bien	Muy bien
Mis hábitos como estudiante (disciplina, organización, constancia)					
Confianza en mi mismo, seguridad.					
Mi interés por mi carrera y mi disciplina.					
Tiempo que le dedico a actividades académicas y extracurriculares.					
Vivir según valores humanos (responsabilidad, respeto, trabajo).					
Mi participación en clase, platicar con maestros, hacer preguntas.					
Situación personal (economía familiar, salud, estado emocional).					
Mis metas para el futuro: claras, definidas.					
Mi compromiso con mis metas (congruencia metas-acciones).					
Influencia positiva de mis padres.					
Influencia positiva de mi familia (hermanos, tíos, primos...).					
Influencia positiva de mi novio/novia.					
Influencia positiva de mis amigos (de dentro o fuera de la UDEM).					
Conocimientos y experiencia (profesional) de profesores UDEM.					
Capacidad docente de profesores UDEM (saber enseñar).					
Motivación, entusiasmo, convicción, de profesores UDEM.					
Mi nivel de contacto, acercamiento, confianza, con profesores.					
Mi profesor me anima, me motiva, me guía, me inspira, me asesora.					
Servicio, competencia, accesibilidad de Director de Carrera.					
Nivel de compromiso, <u>grupo cercano</u> de compañeros de estudios.					
Nivel de compromiso de mis compañeros de estudios, en general.					

...continúa...

Appendix A, 3/5

... continúa...

SUB-FACTOR	<div>☹</div> <div>☺</div>				
	Muy mal	Mal	Regular	Bien	Muy bien
Programa curricular (diseño, contenido, calidad, relevancia, actual).					
Mis cursos: interesantes, relevantes, de buena calidad.					
Grupos masivos: efectividad, impacto, calidad.					
PEF (relevancia, calidad, aprendizajes).					
Prácticas Profesionales (relevancia, calidad, aprendizajes).					
Exigencia académica: nivel adecuado para ser profesionista exitoso.					
Premios y reconocimientos al desempeño académico.					
Reputación, prestigio institucional (UDEM).					
Ambiente humanista en la UDEM.					
¿Sientes que tú y la UDEM son compatibles? ¿Afines? ¿Qué estás en la institución adecuada para ti?					
Cursos y co-curriculares: relevancia, oferta, calidad, acceso.					
Congresos, simposio, eventos relevantes.					
Grupos y asociaciones estudiantiles: oportunidades, apoyo.					
Servicio social: relevancia, aprendizaje, impacto.					
Apoyo a estudiantes foráneos y extranjeros.					
Mi participación en acts. co-curriculares (mesas dir, congresos, etc)					
Servicios administrativos: vigilancia, limpieza, enfermería, etc.					
CIAA (Centro de Información y Atención a Alumnos): servicio.					
Biblioteca: horarios, colección, servicio.					
Becas: oportunidades.					
Servicio becario: relevancia, calidad, pertinencia.					
Información oportuna de eventos, conferencias, fechas imp., etc.					
Computadoras (laboratorios): calidad, cantidad, servicio.					
Estacionamiento: calidad, acceso, disponibilidad, costo-servicio.					
Salones: equipamiento.					
Salones: clima.					
Instalaciones para discapacitados.					
Cafetería: servicio (espacio, variedad, precio-calidad).					
Espacios de esparcimiento.					
Espacios para estudio.					
Áreas verdes.					

Appendix A, 4/5

SECCIÓN 3. (*SECTION 3*).

Preguntas Generales:

Edad: _____

Semestre: _____

Promedio en la carrera (estimado): _____

¿Tienes algún tipo de beca? _____

¿Piensas estudiar un postgrado? _____

¿Es la UDEM tu primera universidad?
(*donde estudias carrera*) _____

¿Te has cambiado de carrera? _____

¿Te graduarás en 10 o menos semestres?
(*en total en tu carrera*) _____

¿Eres foráneo o extranjero? _____

Preparatoria de procedencia: _____

¿Trabajas como becario en la UDEM? _____

¿Trabajas fuera de la UDEM? _____

¿Si?¿Cuántas horas a la semana? _____

Otra vez, ¡¡¡gracias!!!

APPENDIX B: IQA – Data for SIDs Preparation

COMBINED INTERVIEW THEORETICAL CODE FREQUENCY TABLE RELATIONSHIPS TO BE USED TO CREATE THE SID (SHADOWED)

FRESHMEN

FREQUENCIES IN AFFINITY PAIR ORDER

Factors (affinities, elements):

- | | |
|----------------------------|---|
| 1 Personal Aspects | 6 Academic Program (major) |
| 2 Personal Hopes and Goals | 7 Extracurricular Activities and Scholarships |
| 3 Relevant People | 8 Services and Infrastructure |
| 4 Faculty | 9 Learning, Persistence (#10 in the SID) |
| 5 Fellow Students | 10 Student Success (#11 in the SID) |

Participants: 15 / Data collected through individual interviews

Pair	Freq	Pair	Freq	Pair	Freq	Pair	Freq	Pair	Freq
1 > 2 9		2 > 3 2		3 > 4 4		4 > 5 10		5 > 6 8	
1 < 2 5		2 < 3 12		3 < 4 1		4 < 5 2		5 < 6 5	
1 > 3 0		2 > 4 4		3 > 5 9		4 > 6 12		5 > 7 7 use	
1 < 3 15		2 < 4 10		3 < 5 0		4 < 6 3		5 < 7 7	
1 > 4 2		2 > 5 8		3 > 6 11		4 > 7 11		5 > 8 2	
1 < 4 9		2 < 5 4		3 < 6 1		4 < 7 0		5 < 8 6	
1 > 5 10		2 > 6 9		3 > 7 9		4 > 8 4		5 > 9 9	
1 < 5 4		2 < 6 6		3 < 7 1		4 < 8 7		5 < 9 4	
1 > 6 14		2 > 7 7		3 > 8 1		4 > 9 14		5 > 10 9	
1 < 6 1		2 < 7 4		3 < 8 1		4 < 9 1		5 < 10 4	
1 > 7 11		2 > 8 3		3 > 9 13		4 > 10 14			
1 < 7 2		2 < 8 4		3 < 9 2		4 < 10 1			
1 > 8 3		2 > 9 13		3 > 10 12					
1 < 8 5		2 < 9 2		3 < 10 1					
1 > 9 14		2 > 10 14							
1 < 9 1		2 < 10 1							
1 > 10 15									
1 < 10 0									
	120		103		66		79		61
6 > 7 12		7 > 8 0		8 > 9 13		9 > 10 12			
6 < 7 1		7 < 8 14		8 < 9 1		9 < 10 3			
6 > 8 2		7 > 9 11		8 > 10 12					
6 < 8 11		7 < 9 4		8 < 10 1					
6 > 9 15		7 > 10 13							
6 < 9 0		7 < 10 2							
6 > 10 14									
6 < 10 1									
	56		44		27		15		

Total Frequency: 571
 = use relationship in the SID
 Number of relationships for the SID: 41
 Note: One conflicting relationship (5,7)

10 Affinity Tabular IRD

FRESHMEN

Affinity Name
1. Personal Aspects
2. Personal Hopes and Goals
3. Relevant People
4. Faculty
5. Fellow Students
6. Academia Program (major)
7. Extracurricular Activities and Scholar
8. Services and Infrastructure
10. Learning, Persistence
11. (Student) Success

Tabular IRD													
	1	2	3	4	5	6	7	8	10	11	OUT	IN	Δ
1		↑	←	←	↑	↑	↑		↑	↑	6	2	4
2	←		←	←	↑	↑	↑		↑	↑	5	3	2
3	↑	↑			↑	↑	↑		↑	↑	7	0	7
4	↑	↑			↑	↑	↑		↑	↑	7	0	7
5	←	←	←	←		↑	↑	←	↑	↑	4	5	-1
6	←	←	←	←	←		↑	←	↑	↑	3	6	-3
7	←	←	←	←	←	←		←	↑	↑	2	7	-5
8					↑	↑	↑		↑	↑	5	0	5
10	←	←	←	←	←	←	←	←		↑	1	8	-7
11	←	←	←	←	←	←	←	←	←		0	9	-9

Count the number of up arrows (↑) or *Outs*

Count the number of left arrows (←) or *Ins*

Subtract the number of *Ins* from the *Outs* to determine the (Δ) *Deltas*

$$\Delta = \text{Out} - \text{In}$$

Appendix B, 2/6

FRESHMEN

Tabular IRD – Sorted in Descending Order of Δ													
	1	2	3	4	5	6	7	8	10	11	OUT	IN	Δ
3	↑	↑			↑	↑	↑		↑	↑	7	0	7
4	↑	↑			↑	↑	↑		↑	↑	7	0	7
8					↑	↑	↑		↑	↑	5	0	5
1		↑	←	←	↑	↑	↑		↑	↑	6	2	4
2	←		←	←	↑	↑	↑		↑	↑	5	3	2
5	←	←	←	←		↑	↑	←	↑	↑	4	5	-1
6	←	←	←	←	←		↑	←	↑	↑	3	6	-3
7	←	←	←	←	←	←		←	↑	↑	2	7	-5
10	←	←	←	←	←	←	←	←		↑	1	8	-7
11	←	←	←	←	←	←	←	←	←		0	9	-9

Tentative SID Assignments	
3	Primary Driver
4	Primary Driver
8	Primary Driver
1	Secondary Driver
2	Secondary Driver
5	Secondary Outcome
6	Secondary Outcome
7	Secondary Outcome
10	Secondary Outcome
11	Primary Outcome

Primary Driver
 Secondary Driver
 Circulator / Pivot / ?
 Secondary Outcome
 Primary Outcome

**COMBINED INTERVIEW THEORETICAL CODE FREQUENCY TABLE
RELATIONSHIPS TO BE USED TO CREATE THE SID (SHADOWED)**

SENIORS

FREQUENCIES IN AFFINITY PAIR ORDER

Factors (affinities, elements):

- | | |
|--|---|
| 1 Personal Aspects | 6 Educat. & Adm. Services (#8 in the SID) |
| 2 Important People | 7 Facilities (#9 in the SID) |
| 3 Faculty and Personnel (#4 in the SID) | 8 Learning, Persistence (#10 in the SID) |
| 4 Academic Elements (#6 in the SID) | 9 Student Success (#11 in the SID) |
| 5 Extracurricular Activities (#7 in the SID) | |

Participants: 15 / Data collected through individual interviews

Pair	Freq	Pair	Freq	Pair	Freq	Pair	Freq	Pair	Freq
1 > 2	1	2 > 3	6	3 > 4	14	4 > 5	9	5 > 6	0
1 < 2	13	2 < 3	1	3 < 4	1	4 < 5	5	5 < 6	6
1 > 3	5	2 > 4	8	3 > 5	11	4 > 6	3	5 > 7	0
1 < 3	9	2 < 4	3	3 < 5	1	4 < 6	6	5 < 7	15
1 > 4	10	2 > 5	9	3 > 6	6	4 > 7	2	5 > 8	14
1 < 4	4	2 < 5	2	3 < 6	3	4 < 7	8	5 < 8	0
1 > 5	13	2 > 6	2	3 > 7	4	4 > 8	15	5 > 9	14
1 < 5	2	2 < 6	2	3 < 7	7	4 < 8	0	5 < 9	0
1 > 6	4	2 > 7	2	3 > 8	15	4 > 9	15		
1 < 6	8	2 < 7	1	3 < 8	0	4 < 9	0		
1 > 7	4	2 > 8	11	3 > 9	15				
1 < 7	7	2 < 8	3	3 < 9	0				
1 > 8	13	2 > 9	10	3 < 9	0				
1 < 8	2	2 < 9	4						
1 > 9	14								
1 < 9	1								
	110		64		77		63		49
6 > 7	1	7 > 8	13	8 > 9	15				
6 < 7	13	7 < 8	0	8 < 9	0				
6 > 8	11	7 > 9	12						
6 < 8	0	7 < 9	0						
6 > 9	10								
6 < 9	0								
	35		25		15				

Total Frequency: 438
 = use relationship in the SID
 Number of relationships for the SID: 30

9 Affinity Tabular IRD

SENIORS

Affinity Name
1. Personal Aspects
3. Important People
4. Faculty and Personnel
6. Academic Elements
7. Extracurricular Activities
8. Educational and Adm. Services
9. Facilities (physical plant)
10. Learning, Persistence
11. (Student) Success

Tabular IRD												
	1	3	4	6	7	8	9	10	11	OUT	IN	Δ
1		←	←	↑	↑	←	←	↑	↑	4	4	0
3	↑			↑	↑			↑	↑	5	0	5
4	↑			↑	↑		←	↑	↑	5	1	4
6	←	←	←		↑		←	↑	↑	3	4	-1
7	←	←	←	←			←	↑	↑	2	1	1
8	↑						←	↑	↑	3	1	2
9	↑		↑	↑	↑	↑		↑	↑	7	0	7
10	←	←	←	←	←	←	←		↑	1	7	-6
11	←	←	←	←	←	←	←	←		0	8	-8

Count the number of up arrows (↑) or *Outs*

Count the number of left arrows (←) or *Ins*

Subtract the number of *Ins* from the *Outs* to determine the (Δ) *Deltas*

$$\Delta = \text{Out} - \text{In}$$

Appendix B, 5/6

SENIORS

Tabular IRD – Sorted in Descending Order of Δ												
	1	3	4	6	7	8	9	10	11	OUT	IN	Δ
9	↑		↑	↑	↑	↑		↑	↑	7	0	7
3	↑			↑	↑			↑	↑	5	0	5
4	↑			↑	↑		←	↑	↑	5	1	4
8	↑						←	↑	↑	3	1	2
7	←	←	←	←			←	↑	↑	2	1	1
1		←	←	↑	↑	←	←	↑	↑	4	4	0
6	←	←	←		↑		←	↑	↑	3	4	-1
10	←	←	←	←	←	←	←		↑	1	7	-6
11	←	←	←	←	←	←	←	←		0	8	-8

Tentative SID Assignments	
9	Primary Driver
2	Primary Driver
4	Secondary Driver
8	Secondary Driver
7	Secondary Driver
1	Circulator / Pivot / ?
6	Secondary Outcome
10	Primary Outcome
11	Primary Outcome

Primary Driver
 Secondary Driver
 Circulator / Pivot / ?
 Secondary Outcome
 Primary Outcome

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